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THE

# MISCELLANEOUS DOCUMENTS

OF THE

# HOUSE OF REPRESENTATIVES

FOR THE

SECOND SESSION OF THE FORTY-EIGHTH CONGRESS.

1884-'85.

IN SEVENTEEN VOLUMES.

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# THIRD ANNUAL REPORT

OF THE

# BUREAU OF ETHNOLOGY.

BY J. W. POWELL, DIRECTOR.

## INTRODUCTORY.

Researches among the North American Indians, as directed by act of Congress, have been diligently prosecuted during the fiscal year 1881–'82. Operations have been continued on the plan established in previous years, which may be briefly set forth as follows:

First. The direct employment of scholars and specialists to conduct investigations and prepare the results for publication. The names of those so employed, with notice of the special line of work in which each one is engaged, will appear under the several headings of this report.

Second. The stimulation and guidance of research by collaborators who voluntarily contribute the results of their work for publication or other use. This collaboration has been obtained by wide and gratuitous circulation of all the publications of the Bureau, and by instituting correspondence with many persons whose abilities and opportunities appeared to render it desirable. Such contributions are again invited, and will always be thankfully acknowledged. When in the shape of material objects they will be deposited in the National Mu seum, and the depositors will receive acknowledgment therefrom.

The work of the Bureau during the year may be conveniently divided into (1) Publications, (2) Field work, (3) Office work. The last class of work, however, is not independent of

field work, but supplementary to it, being the study, compilation, and arrangement of material obtained in the field, with such additions as can be procured from literature and correspondence, and with the preparation of requisite illustrations.

## PUBLICATIONS.

Three papers were published during the year, in the order given below. A small edition of each was issued separately, but the main publication comprised the three papers together (separate paginations being preserved) as Volume V, "Contributions to North American Ethnology," a quarto volume of 421 pages, exclusive of 53 full-page plates, and containing 105 illustrations in the text.

### OBSERVATIONS ON CUP-SHAPED AND OTHER LAPIDARIAN SCULPTURES, BY CHARLES RAU.

Dr. Charles Rau is well known to the scientific world as Curator of the Department of Archæology in the Smithsonian Institution, and as the author of several standard works in the branch of study to which he has long been devoted. His present paper discusses a remarkable and widely distributed class of ancient sculptured objects, called by the French *pierres à écuelles*, and by the Germans *Schalensteine*, to which he has applied the English term "cup-stones." They may be described as stones or rocks in which cup-shaped cavities, varying in size, number, and arrangement, have been made by the hand of man. They are often associated with engraved figures of a different character. A point of much interest regarding them is that they are found in the United States and in other parts of the Western hemisphere, in form and under conditions analogous to those long known in the Eastern continent as subjects of antiquarian research affording little satisfactory result. This is an additional example of the many similarities in prehistoric practices between the Old World and the New from which diverse theories are deduced.

Dr. Rau has described and analyzed, with acumen and eru-

dition, the whole sum of present knowledge concerning these enigmatical inscriptions of antiquity and the objects related to them, presenting in orderly arrangement a mass of valuable information never before collected. His suggestions toward a solution of the problem are cautious and judicious.

**ON PREHISTORIC TREPHINING AND CRANIAL AMULETS, BY ROBERT FLETCHER, M. R. C. S. ENG., ACT. ASST. SURGEON, U. S. ARMY.**

The subject of this paper is a problem which has occupied physiologists and anthropologists for a number of years. Human skulls of the neolithic age have been discovered in dolmens and other ancient depositories, with portions removed showing such evidence of natural cicatrization as to prove that the operation of trephining was performed during life and sometimes has ended many years before death. Also separated portions of such skulls adjoining a segment of the original aperture were found, named from their form rondelles, and later considered to be amulets. This latter practice has been termed posthumous trephining.

Dr. Fletcher contributes an exhaustive review of the whole evidence on the subject, together with an examination of the theories entertained and the method of trephining practiced in modern times by uncivilized tribes. He presents, as his own deduction from the evidence, the theory that the object of prehistoric trephining was to relieve disease of the brain, injury of the skull, epilepsy, or convulsions, and that it was performed by scraping. A remarkable confirmation of his views has been made known since the publication of his paper by the mention in "Samoa" by George Turner, LL. D. [London, 1884], of the practice as existing but a few years ago in the group of volcanic islands in Central Polynesia long known as Navigator's Islands, but correctly termed Samoa. The operation there was to slip up and fold over the scalp, and to scrape the cranial bone with a fine-edged shell until the dura mater was reached. Very little blood was allowed to escape. In some cases the aperture was covered over with a thin piece of cocoanut shell; in other cases the incised scalp was simply

replaced. This practice by the present generation of what was evidently that of the neolithic age was for the same purpose as suggested by Dr. Fletcher, viz, to relieve pain in the head. The "cure" was death to some, but most of the subjects recovered. The precise operation of trephining has not been found to be practiced among the tribes of North America; but they very generally scarify or otherwise wound parts of the body where pain is seated, or supposed to be. Their philosophy of pain is, that it is an evil spirit which they must let out. The early writers, who believed in the benefits of phlebotomy more than is now the custom, gave much credit to the Indians for this practice. It was to them one of the proofs of the advance of American natives in medical and surgical science, which was admitted while knowledge in most other branches was denied. A suggestion occurs that the custom of cutting of the breast, arms, and some other parts of the body, at the mourning ceremonies of Indians, as of other peoples, may have originated in the idea of letting grief, the pain of sorrow, out of the mourner.

## A STUDY OF THE MANUSCRIPT TROANO, BY C. THOMAS, PH. D., WITH AN INTRODUCTION BY D. G. BRINTON, M. D.

The manuscript, or codex, styled Troano, sometimes more simply Tro, was found at Madrid in 1864, in the possession of Don Juan de Tro y Ortolano, Professor of Paleography and a descendant of Hernan Cortez. It was recognized by the Abbé Brasseur de Bourbourg, after his return from Yucatan, as a specimen of the graphic system of the Mayas, and was named by compounding the two names of its owner. It is written on a long strip of maguey paper folded fan-like, forming thirty-five leaves, written on both sides, making seventy pages, and is universally admitted to be a valuable record of the ancient culture of Yucatan. Its full interpretation would probably reproduce much of the arts, social life, and philosophy of a people for which all Americans must entertain deep interest, and the successful act of interpretation would elucidate points of importance in the evolution of written language.

The introduction to the paper, by the distinguished anthropologist Dr. Daniel G. Brinton, is a perspicuous summary of the amount of knowledge upon the graphic system and ancient records of the Mayas existing prior to the publication of Professor Thomas's paper. The latter work exhibits admirable industry and felicitous sagacity, bringing to light many impressive details in addition to his general conclusions, the most important of which are as follows:

That the work was intended chiefly as a ritual or religious calendar to guide the priests in the observance of religious festivals, and in their numerous ceremonies and other duties.

That the figures in the spaces are in some cases symbolical, in others simply pictographic, and, in quite a number, refer to religious ceremonies; but that in many instances they relate to the habits, customs, and occupations of the people.

That the work appertained to and was prepared for a people living in the interior of the country, away from the sea-shore.

That the people of the section where it was prepared were peaceable and sedentary, supporting themselves chiefly on agricultural products, though relying upon gins and traps and the chase to supply them with animal food.

That the execution and character of the work itself, as well as its contents, bear testimony that the people were comparatively well advanced in the arts of barbaric life. But there is nothing to warrant the glowing descriptions of their refinement and general culture given by some of the earlier as well as more modern writers. They correspond with what might be inferred from the architectural remains in some parts of Yucatan.

That the characters, while to a certain extent phonetic, are not true alphabetic signs, but syllabic. Some appear to be ideographic, and others simply abbreviated pictorial representations of objects. They seem, in their several elements to represent different stages of the growth of picture writing into alphabetic writing.

That the work (the original, if the one now in existence be a copy) was probably written about the middle or in the later half of the fourteenth century.

## FIELD-WORK.

### WORK OF MR. CUSHING.

In the early summer of 1881, Mr. Frank Hamilton Cushing carried on, under increasing facilities, investigations into the home life of the Zuñis, mentioned in the second annual report of this Bureau, and prepared to visit the little-known, isolated, and semi-hostile tribe heretofore vaguely mentioned as the Coçoninos. He was anxious to investigate the relationship mutually claimed between these Indians and the Zuñis, and thus, if possible, to supplement his researches among the latter. He was furnished by Dr. Washington Matthews, U. S. A., surgeon at Fort Wingate, New Mexico, with means, which had failed to reach him in time, and by General L. P. Bradley, U. S. A., commanding that post, with two pack mules and appurtenances. He secured the services as guide of a Zuñi Indian named Tsaí-iu-tsaih-ti-wa, who had before visited the country of the Coçoninos, and was accompanied by Tits-ke-mát-se, a Cheyenne Indian, who had been sent by Professor Baird, secretary of the Smithsonian Institution, as an assistant. The party proceeded at once across the country to Moki. At the pueblo of Te-wa Mr. Cushing also secured an interpreter and additional guide, a native trader named Pu-la-ka-kai, who was familiar with the Zuñi language. After a journey of about one hundred miles the great Cañon of Cataract Creek was reached, and proceeding twenty miles down the trail leading through that cañon, the party arrived at the village of the Coçoninos, less than seven miles due south from the Grand Cañon of the Colorado, and more than three thousand feet below the level of the surrounding plains. Here were found about thirty huts, occupied by two hundred and thirty-five Indians—men, women, and children. This is probably the village from which smoke was seen by the daring surgeon of the Ives Expedition, who nearly lost his life in an endeavor to penetrate the cañon. Aside from mention given by the latter in his report, the exact site of the habitations of the Coçoninos had never been officially stated.

During the four days Mr. Cushing was able to pass among the Coçoninos, who call themselves Ha-va-su-pai, "People of the willows," he collected a vocabulary of more than four hundred words, recorded some of the myths of the tribe, and succeeded in securing valuable notes regarding the manners, customs, industries, and religion of these people. Dispatching his Moki and Zuñi Indians back to their respective pueblos, he proceeded with Tits-ke-mát-se, in company with a prospector named Harvey Sample, as guide, to Fort Whipple, Arizona. Here he was kindly received and greatly aided in the investigations of ancient ruins in the neighborhood of Prescott and Fort Verde, by General O. B. Willcox, U. S. A., and officers of his command, particularly Lieutenant W. W. Wotherspoon.

Between Camp Huá-la-pai (Walapai), in Western Arizona, and the cliff ruins of the Rio Verde, he discovered a remarkable series of mesa strongholds, exhibiting a crude form of what he regarded as incipient Pueblo architecture.

Mr. Cushing had long been desirous of entering the Order of the Bow, a remarkable esoteric and religious organization of warriors among the Zuñis, with the object of increasing his opportunities of research. After his return to Zuñi from the trip above described he was for the first time able to make the preliminary arrangements necessary for his initiation, and was admitted to membership in this society. His initiation and its consequent immediate advantages enabled him to ascertain that he had but made a beginning in the study of the native religious institutions. He was soon after elected, by virtue of his membership, Assistant Chief to the Governor, or Head Chief of Zuñi, which election was followed within a few months by nomination and subsequent confirmation to the Head War Chieftaincy of the tribe.

In order that he might study the dance societies, or Kâ′-kâ, of the Zuñis, it became necessary for him either to marry into the tribe or to perform some service to the Indians which should increase their faith in him and exalt their opinion of him. He determined, therefore, to effect, if possible, a tour through the East with some of the principal chiefs and priests of the tribe, especially as the latter were desirous of securing sacred water

from the Atlantic Ocean, or the "Ocean of Sunrise"; and they promised him, through their influence in the Kâ'-kâ, admission to it, could he realize for them this desire. Receiving the consent and co-operation of the Director of the Bureau, he started with a delegation of six of the Indians for Washington, where he arrived on the 28th of February, 1882. After spending a few days in Washington, he took the delegation to the shore of the Atlantic, near Boston, where ceremonies were performed recounted elsewhere in detail.

The devotion, energy, and tact exhibited by Mr. Cushing during his researches among the Zuñis, extending over several years, have been fruitful in contributions to ethnologic science, some of which have already been published, but much more remains for future presentation.

### WORK OF MR. STEVENSON.

During the field season of 1881 a party in charge of Mr. James Stevenson was directed to continue ethnologic and archæologic researches among the Pueblo Indian tribes and the ancient ruins of Arizona and New Mexico, the Pueblo of Zuñi and the Moki tribes of Arizona being the designated fields of operation. The large quantities of valuable material, both ancient and modern, possessed by the Pueblo tribes made it important that the work of collecting should be prosecuted energetically, in order to secure as much as possible before the objects should be carried away by visitors and speculators, who, since railroads make the region accessible, are frequently visiting that country.

The party spent about two months at Zuñi, after which it proceeded to the Moki Pueblos, constituting the ancient province of Tusayan, in Northeastern Arizona, remaining there one month. The collection from the Moki Pueblos is especially valuable, as but few specimens had been secured from these tribes except those collected by the Director of the Bureau many years before, during his explorations of the Colorado River of the West.

Among them are some beautiful vases elaborately decorated with unknown designs, and of forms and structure differing

from any hitherto found. The tribes from which they were obtained had no knowledge of the origin of these vases, but they were in all probability made by the people who resided in a village of considerable size, about 12 miles east of Moki, called by the Navajos Tally-hogan, or singing houses. It is probable that some of these people have been absorbed in the Tusayan villages. An examination of this village, which is now in ruins, revealed immense quantities of fragments of pottery, on all of which were designs and figures similar to those on the ancient vessels of the Moki, above referred to. The amount of material secured from Moki is about 12,000 pounds, and that from Zuñi 21,000 pounds. Both of these collections have been deposited in the National Museum.

The value and variety of the objects collected in Zuñi and the Moki Pueblos appear so clearly in the illustrated and descriptive catalogues of them forming part of the Second Annual Report, and of the present volume, that they need not be specially recapitulated in this place.

The Director desires to renew the expression heretofore made of his appreciation of the industry and skill shown by Mr. Stevenson in securing these exhaustive and valuable collections.

### WORK OF MR. VICTOR MINDELEFF.

Mr. Victor Mindeleff, with several assistants, completed a survey of Zuñi for the purpose of constructing a model of this village on a scale of one-sixtieth. The model was subsequently completed, and is now on exhibition in the National Museum. The area covered by Zuñi is 1,200 by 600 feet, not including the goat and sheep corrals and gardens, which occupy a much larger area. The model, however, illustrates all those features. The preparation of this model by Mr. Mindeleff required much labor and skill. It is executed in papier maché, and presents the true colors of the village as well as of all the details.

### WORK OF MR. HILLERS.

During the season, Mr. J. K. Hillers, the accomplished and skillful photographer of the Geological Survey, in addition to

the geographic and geologic illustrations made by him, secured a large number of photographic views of all the Moki villages and of Zuñi, as well as of several ruins in the region surrounding them, among which are character sketches of the people, interiors of their houses, eagle pens, corrals, portraits of men, women and children, many views of the people while in the act of baking pottery, drying meat, dancing, etc. This work will be continued.

### WORK OF MR. GATSCHET.

In November of 1881, Mr. Albert S. Gatschet repaired to South Carolina to investigate the Katába Indians settled on the river of the same name, in York County. They live in the woods, eight miles south of a place called Rock Hill (railroad station), on a reservation of one square mile. The Katába Indians resident there number 85, and thirty to forty live in the neighborhood, working for farmers, and a few also have joined the Mountain Cherokees in Graham County, North Carolina. The large majority of these Indians are mixed bloods, and it is doubted whether there are more than seven full bloods left. They seem to have forgotten much that pertains to their former customs, traditions, beliefs, and superstitions, and are ignorant of their history, which was one of the most creditable and glorious. Mr. Gatschet gathered texts, sentences, and about fifteen hundred terms of their vocalic language, which they speak unmixed with foreign elements. Only about twenty Katábas still speak the language.

The Cháta, which he visited subsequently at New Orleans, Louisiana, and on the north side of Lake Pontchartrain, are poor, shy, and bashful; live off their vegetable products, which they sell at the French market at New Orleans. They seem to have been reduced to this condition by the raids made upon them during the last war, by which their settlements north of Lake Pontchartrain were broken up. As soon as it was perceived that their dialect differed in grammar and pronunciation from the one spoken by the Cháta in the Indian Territory, Mr. Gatschet concluded to gather as many as possible of their words and sentences (texts were not obtainable), although their utter-

ance made it exceedingly difficult to obtain material of permanent value.

The Shetimasha Indians of Saint Mary's Parish, on Bayou Tèche, Louisiana, whom he visited afterwards, live at Charenton. They number 35, while 18 others live in the woods north of Grand Lake, or Lake of the Shetimashas, as anciently called. These Indians are, except five or six, all mixed bloods, speak the Creole French, are gay, kind, and amiable to strangers, cultivate small farms, help in cultivating the sugar fields, and in winter remove cypress trees from the flooded swamps. Like the Katába, they speak their language with considerable purity, and circumstances favored the obtaining of ethnologic texts. The phrases, sentences, and terms gathered in Shetimasha, where a stay of two weeks was made, amount to nearly two thousand.

A search for the historical Atákapas, Adáyes, and Taënsas throughout Louisiana was not attended with any results.

### WORK OF MRS. ERMINNIE A. SMITH.

Mrs. Erminnie A. Smith continued her Iroquoian investigations, first visiting the Onondaga Reservation in New York State, and there filling a chrestomathy on the Onondaga dialect, and collecting folk-lore. Later she visited the Six Nations Reserve upon the Grand River in Canada, collecting folk-lore and comparing the dialects.

### WORK OF DR. W. J. HOFFMAN.

Dr. W. J. Hoffman prosecuted investigations in gesture-language and pictographs among the Mandan, Hidatsa, and Arikara Indians living at Fort Berthold, Dakota. Similar information was also obtained from Indians visiting that locality, prominent among which were Dakota, Pani, Absaroka, or Crows, Blackfeet (Satsika), and Ojibwa. On the return journey a small delegation of Dakota Indians from the southern part of Dakota was met at Mendota, Minn., from whom similar information was obtained. The material collected consisted chiefly of extensive lists of gesture-signs, both those peculiar

to individual tribes and those in common use between the several tribes mentioned; vocabularies of the languages with special reference to the subject of gestures; signals, and pictographs, with interpretations; mnemonic characters and marks of personal distinction worn upon the person of the individual or upon personal property.

A topographic map was also made of the Indian village, showing the relative locations of the modern dwellings and the earth lodges, as well as the portions of the village now occupied by the several tribes mentioned.

## EXPLORATIONS IN MOUNDS.

The act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1882, directed that five thousand dollars of the appropriation made for the purpose of continuing ethnologic researches among the North American Indians should be expended in continuing archæologic investigations relating to mound builders and prehistoric mounds. In accordance with this direction investigations were made as follows:

In Tennessee and Arkansas, by Dr. Edward Palmer. A large collection was received from him containing some extremely rare and even unique objects.

In West Virginia and adjacent portions of Eastern Ohio, by Dr. W. DeHass.

In Tennessee, by Mr. W. J. Taylor, who has furnished a number of specimens similar in character to those of Dr. Palmer.

In Florida, by Mr. S. T. Walker. His collections show some peculiarities in the contents of prehistoric mounds and graves in that State as compared with those of Tennessee and Arkansas.

A detailed statement of the collection obtained from the mounds, in connection with other objects received during the year, appears in the illustrated catalogue prepared by Mr. W. H. Holmes, and published in the present volume.

## OFFICE WORK.

Mr. ALBERT S. GATSCHET was engaged during the early part of the year in carrying through the press Part I of the Dictionary of the Klamath Language, in which he had before been occupied. After this he was for several months at work in the collection of new material for the synonymy of the Indian tribes of North America. In this undertaking the tribes of the Mexican States have not been included, with the exception of those which serve to complete a linguistic stock, a large portion of which is embraced within the territory of the United States, *e. g.*, the tribes of the Californian Peninsula and of portions of the State of Sonora, Mexico (Yuman); the Apache (Athabascan) and those which may be ascertained to belong to the Coahuiltecan stock, probably extending into Texas. The tribes of British America were included, because a great portion of them extend into, or have representation in the territory of the United States, *e. g.*, the Eskimauan, Siouan, Athabascan, Algonkian, Wakashan, Salishan, and Kitunahan.

After his return from field work, Mr. Gatschet transliterated the four hundred Cherokí words obtained by him on the Katába Reservation, and translated the Shetimasha material obtained in French. He then resumed work upon the Klamath Dictionary, Part II, one-half of which was completed at the end of the year. When completed, his material will form Vol. II of the series entitled Contributions to North American Ethnology.

Rev. J. OWEN DORSEY was engaged from July, 1881, to May, 1882, in preparing a manuscript of Ɋegiha Myths, Stories, and Letters for the press, amounting to 544 quarto pages in type and stereotyped, to form Vol. VI of the above series.

He was also engaged in reading proof of the Rev. S. R. Riggs's Dakota Dictionary, making corrections and inserting cross-references and synonyms, to form Vol. VII of the series.

He also examined the census schedules of the following tribes: Omaha, Ponka, Osage, Kansas, Iowa, and Oto, revising the spelling as well as the translations of the Indian names.

He collected vocabularies of the Pani, Arikara, Kaddo, Kichai, and Wichita languages, to be used by the Director for comparison purposes. He obtained the gentes of the Kaddo and Wichita, and the gentes, subgentes, and phratries of the Iowa tribe.

During the month of May, 1882, he was engaged in the preparation of a paper on Omaha Sociology, which appears in the present volume.

Mr. J. C. PILLING continued the compilation of the Bibliography of North American Languages during the fiscal year, on the plan outlined in former reports, giving to it such time as could be spared from his regular administrative work. Brief visits to some of the prominent libraries of New York and New England were made during the month of July, and again late in the fall, and much new material was collected. In October the first "copy" was sent to the printer, and in December type-setting was begun. The proof-reading of such matter is necessarily slow, and at the close of the fiscal year but 128 pages had been received. So far as possible these proof-sheets were submitted to the prominent workers in Indian languages in this country, and many additions and corrections were received from these sources.

BREVET LIEUT. COL. GARRICK MALLERY, U. S. Army, continued researches into gesture-language among the tribes of North America with verifications and corrections of material previously collected from them and additions to it. The result indicated is, that while one system of gesture-speech has long existed among the Indians, it is not to be regarded as one formal or absolute language, several groups with their centers of origin being disclosed. In regard to diversity the gesture-signs of speaking men are found to correspond with those of deaf mutes. Not only do many of the particular signs of deaf mutes in America differ from those used with the same signification in some countries of Europe, but a similar disagreement is observed among the several institutions for deaf mute instruction in the United States. When the diverse signs are purely ideographic they are, however, intelligible to all per-

sons familiar with the principles of sign expression, but when, as often occurs, they are conventional, they cannot be understood without the aid of the context or without knowledge of the convention. The instances of diversity among the Indian signs are so numerous that a vocabulary would be insufficient and misleading if it was confined to the presentation of a single sign for each of the several objects or ideas to be expressed and did not supply variants and designation of the several groups of tribes using them. There being no single absolute language, each of the several forms of expression resembling dialects has an equal right to consideration, and without this comprehensive treatment a vocabulary must either be limited to a single dialect, or become the glossary of a jargon. For this reason the collection of the gesture-signs of the Indians for scientific investigation involves many minute details and requires much time.

The frequent presence of delegations of Indian tribes in Washington has been of great value to supplement field-work in the study of their signs. During the year a large collection of gesture-signs was obtained from Pani, Ponka, and Dakota Indians who visited the seat of government on business connected with their reservations, by Dr. W. J. Hoffman, who has assisted Colonel Mallery in the whole of this branch of study.

Special endeavor was made to procure for collation and comparison collections of gesture-signs from tribes and localities in parts of the world from which little or no material of this kind has ever been obtained. The voluminous correspondence and other persevering exertions to accomplish that object have been rewarded by collections from Turkey, Sicily, the Hawaiian and the Fiji Islands, Madagascar, and other distant regions, but of greatest interest are those from the Gilbert Islands and Japan. The result shows that where observers can be found who comprehend the subject of inquiry and are willing to take the requisite pains in research, communication by gesture, either as an existing system or the relic of such system, has nearly always been discovered.

When some expected responses shall have arrived from

points whence mails are unfrequent, and the whole material shall be collated, an attempt will be made to ascertain the laws governing the direct visible expression of ideas between men.

The study of pictographs and ideographs has a close connection with the study of sign language, as in them appears the direct visible expression of ideas in a permanent form. This has been continued by Colonel Mallery, and a considerable amount of material has been collected from North America. It appeared, however, that so small an amount was accessible from other parts of the world in such shape as to be useful for study and interpretation, that it was deemed necessary to issue for wide circulation a preliminary essay as an Introduction to the Study of Pictographs before attempting any comprehensive treatise on the subject for publication. Such an introduction has been prepared.

Colonel Mallery was also engaged during the year in executive duty connected with the preparation and filling up of the schedule for the census of Indians in the United States and in the study of the statistics of population thereby obtained.

Mr. H. W. HENSHAW was engaged in the preparation of a paper on animal carvings from the mounds of the Mississippi Valley, which was published in the Second Annual Report of this Bureau and also in that of a paper on Indian Industries, as illustrated both by recently gathered statistics and by historical records. This study, not yet completed, embraces the advance of the tribes toward civilized industry, together with an exhaustive account of their pristine industries and means of subsistence. He was also closely occupied in executive work connected with the Indian census.

Mr. WILLIAM H. HOLMES, in addition to other and varied duties, studied the shells and the objects made from them as found chiefly in the mounds of North America, the result of his researches appearing in the paper "Art in Shell of the Ancient Americans" published in the Second Annual Report.

Mrs. ERMINNIE A. SMITH, in addition to her field work, elsewhere mentioned, continued the preparation of a Dictionary of the Tuscarora Language.

Dr. H. C. YARROW continued his work of compilation upon the Mortuary Customs and the Medical Practices of the North American Indians, conducting a large amount of correspondence upon these subjects.

Mr. F. H. CUSHING, while in Washington, commenced a paper on the Sociologic and Governmental Institutions of the Zuñis, to complete which it became necessary for him to revisit that people.

Prof. OTIS T. MASON was engaged during the entire year in collecting material for the purpose of compiling a History of Education among the North American Indians.

The DIRECTOR has continued the connected and tedious work before explained; first, of classifying on a linguistic basis all the tribes, remaining and extinct, of North America. Second, of establishing their synonymy, or the reference of their many and confusing titles as given in literature and common usage to a correct and systematic standard of nomenclature. Third, the ascertainment and display on a series of charts, of the habitat of all tribes when first met by Europeans, and at subsequent periods. Much progress has been made in this work recognized as essential to the proper study of Indian anthropology.

## PAPERS ACCOMPANYING THIS REPORT.

The plan heretofore explained by which the several branches of North American Ethnology are systematically presented in Annual Reports is continued in operation. The progress of investigation is shown in them so far as the intervening time and the amount appropriated by Congress allowed. The papers in the present volume embrace researches in the fields of Philosophy, Sociology, and Technology, as is indicated in the following brief references to them severally in the order followed in the volume. The extensive linguistic studies prosecuted, report of which has been made above, will generally require publication in separate volumes.

## NOTES ON CERTAIN MAYA AND MEXICAN MANUSCRIPTS, BY CYRUS THOMAS.

In this paper Professor Thomas continues his study of the symbols and calendar systems of Central America. His attention is chiefly directed to two remarkable leaves, together constituting one plate, of the Maya Manuscript known as the Codex Cortesianus, which is considered to furnish a connecting link between the Maya and the Mexican symbols and calendars. This is compared with the Mexican plate No. 43 of the Borgian Codex, and with plate No. 44 of the Fejervary Codex, believed to be a Tezcucan Manuscript. Illustrations and quotations from a variety of sources are also furnished.

The study of the graphic systems of Mexico and Central America is important for comparison with the origin of writing in the Eastern Hemisphere. The evidence at this time is to the effect that these systems had entered into a transition stage from a simple pictography, in which not merely the idea was presented, but the sound to express the idea in spoken language began to be figured. Proper materials for this study have only recently been obtained and are still meager both in quantity and in determinative value. Professor Thomas has properly considered that the calendar and religious observances were the great and absorbing topics of those persons of the Nahuatlan tribes who were concerned in their graphic systems, and those topics as presented in their paintings and sculptures, rather than imperfect traditions handed down through old Spanish authors, may be expected to indicate the true explanation.

The views taken in the paper regarding the plates discussed lead the author to make the following deductions:

First. That the order in which the groups and characters are to be read is around to the left, opposite the course of the sun, a point of vital importance, formerly much disputed.

Second. The confirmation of a former generally received supposition that the cross was used among these nations as a symbol of the cardinal points.

Third. That the bird figures were used to denote the winds.

This also gives a signification to the birds' heads on the engraved shells found in the mounds of the United States, a full account of which was given by Mr. W. H. Holmes in his paper published in the Second Annual Report of this Bureau. If this supposition be correct, it not only confirms Mr. Holmes's suggestions, but also indicates that the people who built the mounds followed the same custom in this respect as the Nahuatlan tribes.

Fourth. Another and more important result is the proof furnished of an intimate relation between the Mayan and the Nahuatlan tribes, which suggests an ingenious theory presented, though not insisted upon, by the author.

### ON MASKS, LABRETS, AND CERTAIN ABORIGINAL CUSTOMS, BY WILLIAM H. DALL.

Masks have been used by many peoples widely scattered throughout the world, and they have a high historic antiquity. In these masks great diversity of form and structure is observed, and they have been used for many purposes. Mr. Dall explains the development of the use of masks in the following manner:

Masks were probably at first mere shields or protections to the face, supported by the hand, but afterwards were adapted to the form of the face, and were supported upon the head and shoulders. Impenetrability being the first desideratum, exterior appearance or ornamentation was secondary, but subsequently a moral value was sought in capacity to inspire terror, so that by the increase of devices adding to frightfulness the mechanical value became unimportant. Individual variation then began, embracing personal or tribal insignia, and often connected with totemic and Shamanistic systems. By several lines of evolution masks became on the one hand associated with supernaturalism, filling their place in religious paraphernalia, and on the other with buffoonery appropriate to public games and noticeable in the paraphernalia of secret associations. When the mask has developed into a social or religious symbol it has sometimes been worn elevated above the head of the wearer to increase apparent height, and, losing the no longer needed apertures for sight and breathing, has become a

head-dress formed often as a conventionalized model of a face, or of a whole figure, or of a group of figures. By another line of development the ideas symbolized by the effigy cease to be connected with any wearer and the mask becomes an independent object in significance and employment. A custom of preserving and ornamenting an actual human face or head, especially when the posterior part of the cranium is removed, has relation by kindred conceptions and in geographic lines to some of the uses of masks as above indicated.

The science of anthropology is inchoate. A multiplicity of facts have been collected which have not yet been assigned to their proper places in the system; so that the sequence of events in the course of human culture is but partly made out. Yet anthropologists are everywhere attempting to discover and explain the origin and growth of arts, customs, and all other phenomena that relate to the activities of mankind. Such explanations as Mr. Dall's, when based upon extensive knowledge and clear insight into the principles of anthropology, are suggestive and valuable.

With regard to the origin of masking, there is another possible hypothesis, which seems to be more in consonance with the facts relating to this practice observed among the lower tribes of the world. Dramatic representation has its origin quite early in the state of savagery. Savage mythology deals largely with animal life, and savage drama is intimately associated with savage mythology. Among very many of the tribes of North America, some of which are lowest in culture, crude dramas are enacted at winter camp fires from night to night. The old men and women who transmit mythic lore are listened to with great interest, and as the stories of the doings and sayings of the ancient god-beasts are told, resort is had to dramatic personification, to give zest and vigor to the mythic tales. Ofttimes the myth teller is assisted by others, who take parts and act scenes in costume made of the skins of the animals represented. Sometimes the actor assumes the garb of the elk or the bear by covering and disguising himself with the skin of the beast to be imitated. Sometimes he simply wears the skin across his shoulders or dangling from his belt, or per-

chance carried in his hand, especially if the animal represented is one of the smaller species. But perhaps the most common method is found in the use of the skin of the animal for a head-dress. The Director has seen a duck's skin with head and neck stuffed and tail supported by a slight wooden frame used as a head-dress on such an occasion, as well as many other birds' skins thus used. He has often seen the skin from the head of a wolf or a wildcat used in like manner. Very many Indian tribes use the skin from the head of the deer or the mountain sheep, with horns preserved in place and ears erect. Such costuming is very common, and constitutes a part of the dramatic customs of savagery.

There is yet another origin for the dramatic costumes often appearing among the Indians. A clan having an animal totem may use the skin of the animal as its badge. Sometimes feathers from the bird totem, or the tail of the mammal totem, or the carapace of the turtle totem is used. These totemic badges are very largely used on festival occasions, and mark the players in games when clan contests with clan.

It has hence been suggested that masking had its origin in the drama; and it must be understood that the drama in savagery is largely mythic and religious.

Mr. Dall provides an excellent classification of the objects of his study into masks, maskettes, and maskoids, noting under each head the several uses to which each form in the evolutionary series has been applied. He then explains their observed distribution in the following geographical order, viz:

1. North Papuan Archipelago.
2. Peru.
3. Central America and Mexico.
4. New Mexico and Arizona.
5. The region occupied by Indians from Oregon to the northern limit of the Thlinkit.
6. The Aleutian Islands.
7. The Eskimauan region from Prince William Sound to Point Barrow.

Similar geographic relations are found in connection with the practice of labretifery. The labret, among American abo-

rigines, is well known to be a plug, stud, or variously-shaped button, made from diverse materials, which is inserted at or about the age of puberty through a hole or holes pierced in the thinner portions of the face about the mouth. Usually after the first operation has been performed, and the original slender pin inserted, the latter is replaced from time to time by a larger one, and the perforation is thus mechanically stretched, and in course of time permanently enlarged.

Numerous variants of the object and of its mode of attachment are however observed. The practice or "fashion" is traced by Mr. Dall along nearly the whole of the western line of the Americas with some easterly overflows, especially in the middle and South American regions, and its remarkable westerly restriction farther north is noted. It seems to be not sporadic in America, but existing in lines of contact. Its distribution so far as ascertained in other parts of the world is also examined. A suggestion of its origin is made in the early custom of submitting a boy at puberty to a trial of his resolution and endurance before being admitted to the privileges of a member of the community and as a sign of his admitted membership. In this relation it is connected with tattooing and circumcision, the latter practice being known in the Pacific island region as an incident of puberty, suggesting that the rite of infant circumcision, familiar elsewhere, was a later and idealized version with the same general intent.

Mr. Dall's work of research exhibits his own industry and ingenuity supplemented by copious illustrations and quotations, and presents much valuable and novel collateral matter relating to customs and superstitions. From the evidence of the objects and practices discussed he deduces a theory, before entertained by other authors from different considerations, of accessions to the western shores of America from the islands of the Pacific Ocean.

### NAVAJO WEAVERS, BY DR. WASHINGTON MATTHEWS, U. S. A.

Dr. Matthews, assistant surgeon in the United States Army, has continued to utilize his tour of official duty at Fort Wingate, New Mexico, by researches in anthropology through

close observation of the neighboring tribe of the Navajos. The present paper, as connected with the general topic of aboriginal industries, is supplementary to that by him on Navajo Silversmiths, published in the Second Annual Report of this Bureau.

The Navajos are pre-eminent as weavers among the native tribes north of Mexico, and though possibly some of their skill has been learned from the Spaniards through the Pueblos, the art is undoubtedly of earlier origin, and its advance has been through native invention and ingenuity. At one time the textile fabrics were composed of cotton, the fibers of yucca leaves and other plants, the hair of some quadrupeds, and the down of birds. They now are woven from the wool of the domestic sheep, large herds of which are reared.

Dr. Matthews describes clearly, and with the aid of copious illustrations, the whole process, including the dyes, their origin and employment, with the ingenious mechanical appliances for forming the different styles of fabrics and the wonderful variety of designs. The paper is not only of much interest as an account of a valuable and unique product of the loom, but also as exhibiting the power of voluntary adaptation of the Indian mind to novel materials, and its self-improvement within a period ascertained to be brief. Such characteristics noticed among the tribe of Indians least influenced by civilization, are conclusive against the *ferœ naturæ* theory, sometimes urged an excuse for the destruction of the natives of America. This is now happily vanishing with other errors, all tending to portray the Indian as an exceptional part of the human race, instead of being, as he is, a living example of our own prehistoric past.

### OMAHA SOCIOLOGY, BY REV. J. OWEN DORSEY.

Mr. Dorsey, who had, in the year 1871, entered upon service as a missionary among the group of Indians, one tribe of which is the subject of this paper, and thereby thoroughly understanding their language and habits, has re-examined their social systems in the field since he has made a special study of the science of anthropology. His exhaustive and well-arranged production, the work of fourteen years in preparation

and execution, throws a flood of light upon many problems of social evolution applicable to the whole human race. The Omahas, who belong to a separate group of the Siouan linguistic stock, were interrupted by civilization in their autogenous development at a time when they admirably represented a culture stage, called by Morgan the older period of barbarism, and by the Director the closing stage of savagery, and its characteristic details have never yet been more thoroughly explained and illustrated than in the present paper. A careful student of it will observe many customs and institutions which have been evolved into those appearing in the first dawn of history among the progenitors of the English speaking people. This paper will form a part of the basis of a work by the Director upon the general subject of Sociology.

Mr. Dorsey's paper first sets forth the classification of the group formed by the cognate tribes and the migration and history of the Omahas so far as ascertained. It then explains that among these tribes the primary unit is the gens or clan, composed of a number of consanguinei, claiming descent from a common ancestor and having a common taboo or taboos. The largest division of the tribe is into two half tribes, not strictly phratries, and each composed of five gentes. Each gens is divided into subgentes, of which there are traces of four to each gens. The group of men thus organized is a kinship state, that is, one in which the governmental functions are performed by men whose positions in the government are determined by kinships, and in it rules relating to kinship and the reproduction of the species constitute the larger body of the law. The law regulates marriage, allowing but narrow limits of personal choice, and prescribes the rights and duties of the several members of a body of kindred to each other. Individuals are held responsible chiefly to their kindred, and certain groups of kindred are held responsible to other groups of kindred.

The differentiation of organs in the state is discussed, with state classes, servants, and corporations, the latter being chiefly societies for religious and industrial objects The gentile system is minutely described; the kinship system and marriage

laws analyzed. The topic of domestic life includes courtship and marriage customs, domestic etiquette, treatment of children, standing of women, widows and widowers, rights of parents, personal habits, and politeness. Visiting customs and dances are explained. Industrial occupations are divided into those relating to the sustenance of life, to the protection of life, and to the regulation of life. The mass of information contributed, with clear exposition and illustration, will be equally interesting to the special student and to the general reader.

Many important facts are brought out in the treatment of the Omaha gens or clan, and it is believed that a general characterization of the clan, and of the tribe, of which it forms an integral part, especially as they are found in North America, will shed some light upon the subject of which Mr. Dorsey treats in his paper.

## ON KINSHIP AND THE TRIBE.

So far as is now known, tribal society is everywhere based on kinship. In the simplest form of which there is any knowledge, the tribe consists of a group of men calling one another brother, who are husbands to a group of women calling one another sister. The children of these communal parents call all the men fathers, and all the women mothers, and one another brother and sister. In time these children become husbands and wives in common, like their parents. Thus the kinship system recognizes husbands and wives, fathers and mothers, sons and daughters, brothers and sisters, and grandparents and grandchildren. The only kinship by affinity is that of husband and wife. The only collateral kinships are those of brother and brother, sister and sister, and brother and sister. The lineal kinships are father and son, father and daughter, mother and son, mother and daughter, with grandparents and grandchildren also recognized. There is no recognized father-in-law, mother-in-law, brother-in-law, nor sister-in-law; there is no uncle, no aunt, no cousin, no nephew, no niece recognized.

It will thus be seen that all of the collateral kinships of uncle and aunt and nephew and niece are included in the lineal kinship of parent and child, and cousins of whatever degree are reckoned as brothers and sisters. Let any person be designated as *Ego*. Then all the men of the antecedent generation are his fathers, and all the women his mothers; all the males of his own generation are his brothers, and all the females his sisters; and all the males of the following generation are his sons, and all the females his daughters. Selecting the Ego from any generation and reckoning from him the antecedent and subsequent generations, the following consanguineal kinship groups will be found: Ego will be one of a group of brothers; there will be a group of sisters, a group of fathers, a group of mothers, a group of grandfathers, and a group of grandmothers; there may also be a group of sons and a group

of daughters, a group of grandsons and a group of granddaughters.

In the use of the terms "brother," "sister," "father," "son," "mother," "daughter," "grandfather," "grandson," "grandmother," and "granddaughter" in this manner, it must be clearly understood that in every case the term applies to every one of the members of a group, only a part of whom bear the relation which that term implies among civilized peoples, who classify by *degrees* of consanguinity.

Thus, the father-group embraces the father and all his own brothers; but as the father calls all his male cousins brothers, it also includes the father's male cousins. The father-group therefore includes the father and all of those persons whom the father calls by the name of "brother."

Ego calls all the sons of his father and mother brothers; he calls also all his father's brothers' sons, and his father's sisters' sons, and his mother's brothers' sons, and his mother's sisters' sons, brothers. And if there be male cousins of the second, third, fourth, fifth, or any other degree, he calls them all alike brothers. The brother-group, therefore, may be very large. In like manner the mother-group, the sister-group, the son-group, and the daughter-group may be correspondingly large. The grandfather-group and the grandmother-group include all collateral kindred of that generation; and in like manner the grandson-group and the granddaughter-group include all the collateral kindred of their generation. Under this system all kinships may be thrown into a very few groups, and each one of these groups is designated by the kinship term properly belonging to the person in the group nearest of kin to Ego.

The essential principle of this method of reckoning kinship is that collateral kinship is not recognized. All of the kindred are included in the lineal groups; and in every generation a group of brothers is constituted, including all of the males of that generation, and a group of sisters is constituted, including all of the females of that generation.

That such a kinship body has ever existed is a matter of inference; its discovery as an objective fact has not been made. However, it is predicated upon very strong inferential evi-

dence. In the forms of society actually found among the lower tribes of mankind, institutions are discovered that are believed to be survivals from such a form of tribal organization. And the philologic evidence is perhaps still stronger; in fact, the hypothesis was originally based solely upon linguistic data, as languages have been found in which terms for husband, wife, father, mother, son, daughter, elder brother, younger brother, elder sister, and younger sister occur, together with those expressive of the kinships that arise through the recognition of grandparents and grandchildren, while terms for collateral kinships are not found.

All tribes that have yet been carefully studied present a more elaborate form of social organization than that above described. This more highly developed structure is usually exhibited, among other things, in a more elaborate system of classifying kinships. Additional groups are constituted, so that certain collateral kinships are differentiated.

In the brothers and sisters of parents four natural kinships are possible, namely, (*a*) paternal uncle, called by the Romans *patruus;* (*b*) maternal uncle, called by the Romans *avunculus;* (*c*) paternal aunt, called by the Romans *amita;* and (*d*) maternal aunt, called by the Romans *matertera.* The recognition of these four groups would lead to the recognition of the correlative cousins, in four classes, male and female in each class; and if terms were used distinguishing sex, eight classes of cousins would arise through the four classes of uncles and aunts. In this direction the first step in the differentiation of additional kinships is made. Let us call paternal uncles *patruates*, maternal uncles *avunculates*, paternal aunts *amitates*, and maternal aunts *materterates.*

Let us suppose that the relation of husband and wife is not the same as the relation of brother and sister; that is, that men do not marry their own sisters, but that a brother-group marries a sister-group in common. In this case fathers' sisters will no longer be mothers, but will constitute a group of amitates. In like manner, mothers' brothers will no longer be fathers, but will constitute a group of avunculates. The institution of a group of amitates will necessitate the establishment of the

correlative cousin-groups. Thus, with the reduction of the father-group there will be a corresponding reduction of the brother and sister groups; and with the reduction of the mother-group there will be an additional corresponding reduction of the brother and sister groups; that is, the paternal aunts and maternal uncles will carry with them their correlative nephews and nieces, and such nephews and nieces will be substracted from the brothers and sisters. In this stage of kinship development there is still communal marriage. It may not always be actual, as gradually restrictions are thrown around it; but if not actual, it is always potential. The form of kinship now reached is not an inference from philology and the survival of customs, but is an observed fact among some of the tribes of the earth.

The recognition of patruates (paternal uncles) must next be considered. Such a recognition results in the establishment of two additional cousin-groups, as the sons and daughters of patruates are taken out from the "brothers" and "sisters" of Ego. At this stage brothers and sisters are still own (natal) and collateral, but the collateral brothers and sisters include only the children of mothers' sisters, and this because a group of materterates is not established.

We have now reached that kinship system which is perhaps the most widely distributed among existing tribes of mankind. It will be well, then, to describe it once more, that it may be clearly understood:

The brother-group consists of the sons of a woman, together with the sons of all of her sisters, own and collateral; and the sister-group is of like extension. The son-group is coextensive with the brother-group to which the son belongs; the daughter-group is coextensive with the sister-group to which the daughter belongs; the father-group is coextensive with the brother-group to which the father belongs; and the mother-group has a like extension. The patruate-group is coextensive with the brother-group of the paternal uncle; the amitate-group is coextensive with the sister-group to which the paternal aunt belongs; the avunculate-group is coextensive with the brother-

group to which the maternal uncle belongs; but there is no materterate-group (maternal aunt).

The essential characteristic of this system of kinship is that the brother-group consists of own brothers, together with the collateral brothers that come through maternal aunts; and that the sister-group consists of own sisters, together with the collateral sisters that come through maternal aunts; and it matters not whether maternal uncles and paternal uncles are distinguished from each other. They may or may not be thrown into one group. The cousins which arise from the discrimination of paternal and maternal uncles and paternal aunts may be thrown into two, four, or six groups; but the general system does not seem to be affected thereby. Where this system of kinship prevails, the brother and sister groups are on the mother's side, the children belonging to their mothers and not to their fathers, and descent is said to be in the female line.

There is another system of tribal organization which widely prevails In this the mother's sisters are recognized as maternal aunts, and a materterate-group is constituted of the mother's sisters, own and collateral, and the cousins arising therefrom are taken out from the brother and sister groups. But in this case the father's brothers, own and collateral, are still considered as fathers; there is no patruate group. The brother-group is thus composed of the sons of the father with the sons of all his brothers, own and collateral. It is therefore a large group, and the sister-group corresponds therewith. When the brother and sister groups arise through paternal uncles, children belong to their fathers, and descent is said to be in the male line.

From the above statements it will be seen that one of the fundamental principles used in classifying kinships in tribal society is that which arises from the discrimination of generations. The simple communal form first described is classed in groups of kindred on characteristics of generations and sex, and in the various systems which develope from it the characteristic of distinct generations still remains, although collateral descents are to some extent differentiated from lineal descent.

It would seem that generation-groups extending collaterally many degrees would speedily become confused, as a series of

generations might be much shorter in one line than in another. If three sisters have each three daughters, the eldest daughter of the eldest sister may be many years older than the youngest daughter of the youngest sister, and in several generations the discrepancy of ages might become very great. We do not know in all cases how this confusion is avoided, but in some tribes a method of adjustment has been discovered which is very simple.

It must always be remembered that relative age is expressed in the kinship terms of this stage of culture. Thus there are two terms for brother, one signifying elder brother, the other younger brother. There are also two terms for sister—elder sister and younger sister. In the Shoshonian cases to which reference is here made, if a male child is born who is a "group" brother of Ego's father, but younger than Ego, Ego does not call him father, but younger brother. In one case discovered, Ego calls the "group" father born after himself, son. Among the same tribes, in the case of uncles, the uncle born after the nephew is called nephew.

A case like the following has been discovered: There are two brothers born of the same mother; the elder brother calls a particular person son, because that particular person was born after himself; but the younger calls him father, because he was born prior to himself. This method of adjusting generations has been discovered in but few cases, viz., among the Shoshonian tribes, and perhaps among the Wintuns. In this stage language frequently lends its aid to adjustment. This is the case when the kinship name is a reciprocal term with a termination signifying elder or younger. Thus, in a Shoshonian tribe *ain* is such a reciprocal term used by uncle and nephew; the termination *sen* is a diminutive. The nephew calls his uncle *ain*, the uncle calls the nephew *ainsen* or *aitsen*, little uncle; and in this case, if the uncle was born after the nephew, the nephew would be called *ain* and the uncle *aitsen*. A reciprocal relationship term, i. e., one designating a relationship and used by both parties, is common.

In some of the cases adjustments are known to have been made by convention, and individuals have been taken from

one generation and placed in another, by agreement of the elder women of the clan.

Unadjusted kinships are frequently discovered, so that the kinships claimed seem strange to civilized persons accustomed only to the kinships recognized in the higher states of culture. Thus it has frequently been found that an adult has claimed a child for his grandmother and a babe for his father. The subject is one of interest, and deserves careful study.

The method of classifying and naming by kinship terms the six groups of cousins, their children and their children's children, has been neglected, in order that the general subject might not be buried in details, and from the further consideration that the principles of tribal organization can be set forth without the aid of such additional facts.

In the above statements the fundamental principles of tribal kinship have been explained, and they may be restated as follows:

I.—A body of kindred constituting a distinct body-politic is divided into groups, the males into groups of brothers and the females into groups of sisters, on distinctions of generations, regardless of degrees of consanguinity; and the kinship terms used express relative age. In civilized society kinships are classified on distinctions of sex, distinctions of generations, and distinctions arising from degrees of consanguinity.

II.—When descent is in the female line, the brother-group consists of natal brothers, together with all the materterate male cousins of whatever degree. Thus mother's sisters' sons and mother's mother's sisters' daughters' sons, &c., are included in a group with natal brothers. In like manner the sister-group is composed of natal sisters, together with all materterate female cousins of whatever degree.

III.—When descent is in the male line, the brother-group is composed of natal brothers, together with all patruate male cousins of whatever degree, and the sister-group is composed of natal sisters, together with all patruate female cousins of whatever degree.

IV.—The son of a member of a brother-group calls each one of the group, father; the father of a member of a brother-group calls each one of the group, son. Thus a father-group is coextensive with the brother-group to which the father belongs. A brother-group may also constitute a father-group and grandfather-group, a son-group and a grandson-group. It may also be a patruate-group and an avunculate-group. It may also be a patruate cousin-group and an avunculate cousin-group; and in general, every member of a brother-group has the same consanguineal relation to persons outside of the group as that of every other member.

The principles enunciated above may be stated in another way, namely: A kinship body is divided into brother-groups and sister-groups, and group is related to group lineally and collaterally; and every group bears a distinct relationship to every other group.

It will thus be seen that the brother-group and the sister-group constitute the fundamental units of tribal society.

A tribe may be defined as follows: A tribe is a congeries of brother-groups and sister-groups, and every group recognizes a distinct correlative consanguineal kinship with every other group; and series of groups are related to series of groups by the ties of affinity, *i. e.*, marriage; to explain which necessitates the consideration of the clan.

## ON KINSHIP AND THE CLAN.

In tribal society the tribe, or body-politic, is divided into groups of brothers and groups of sisters. One form of the brother-group includes not only the sons of one women, but also the sons of her sisters; and not only the sons of her natal sisters, but also the sons of her collateral sisters; *i. e.*, the brother-group includes the natal brothers, together with all of the male cousins of the first, second, or $n^{th}$ collateral line, reckoning always through females. Sister-groups are constituted in like manner.

Another form exists in which to the natal brothers are added all male cousins to the $n^{th}$ degree that come through paternal uncles, reckoning always through males. Sister-groups are constituted in like manner.

With some tribes the brother and sister groups arise from male descent; but a much larger number of tribes have these groups constituted through female descent. The two systems of kinship are at the base of two distinct systems of clan organization.

When the brother and sister groups arise through female descent, a larger group is constituted, reckoning kinship through females only. The constitution of this larger body, a group of groups, must be clearly understood. Every brother-group has its correlative sister-group. Take, then, a brother-group and a sister-group that are thus correlated and call them the *Ego* group. The mothers of the Ego group constitute another sister-group within themselves, and the brother-group to which they are correlated are the avunculates of the Ego group. Call this brother and sister group the first ascendent of the Ego group. The mothers of the first ascendant group constitute

another sister-group within themselves, and the brother-group to which they are correlated are the avunculates of the first ascendent group. Thus a second ascendant brother and sister group is constituted. In the same manner third, fourth, and $n^{th}$ ascendant brother and sister groups may be constituted.

Returning now to the Ego group. The sisters of the Ego group have sons and daughters who are brothers and sisters to one another, and they constitute a first descendant brother and sister group. The sisters of the first descendant group have children who are brother and sister to one another and constitute a second descendant group. In the same manner the third, fourth, and $n^{th}$ descendant group may be constituted. The Ego group, together with the ascendant groups and descendant groups, constitute a lineal series of brother and sister groups, reckoning always through females. Such a body is here called a group of *enates*, and kinship thus reckoned is called enatic kinship. On the other hand, if the brother and sister groups come through paternal uncles, and the lineal series is reckoned exclusively through males, it is called a body of *agnates*, and the kinship is called agnatic kinship.

Whenever enatic or agnatic kinship is recognized, the tribe becomes much more highly composite than in the case of the communal family. There are always several co-ordinate groups of people united into a larger group, the tribe. For the present let us use the term "tribe" for the name to distinguish the group of the highest order, and the term "clan" to distinguish each of the co-ordinate groups of the second order into which the tribe is divided.

*The first characteristic* of the clan is thus reached: A clan is one of the co-ordinate groups into which a tribal state is divided.

The tribe itself is a body of intermarrying cognates; so that, in the tribe, kinship by consanguinity and affinity is recognized. Within the clan, kinship by affinity is not recognized; that is, the husband and wife do not belong to the same clan, and kinship by consanguinity is limited to kinship traced through females, or to kinship traced through males, as the case may be; and in both, but a part of the cognates are included. In one

case the clan is enatic, and in the other it is agnatic. In the one case descent is through females, in the other through males. An enatic clan consists of a brother-group and a sister-group in each of the generations represented in the clan, and the kinship ss reckoned only through females. An agnatic clan consists of a brother-group and a sister-group in each of the generations represented in the clan, and the kinship is reckoned only through males.

*A second characteristic* of a clan may therefore be given: A clan is a body of either enatic or agnatic kindred.

When the clan is enatic it usually has a common worship of a tutelar god. This must be distinguished from the tribal worship, which is more miscellaneous, and based upon polytheism. The tutelar god, or totem, is often an animal; or sometimes it may be a river, a mountain, the sun, or some other object; in which case the members of the clan call themselves the children of the animal, the river, the mountain, or the sun, as the case may be. When the clan is agnatic, the tutelar god is usually some ancestor who has distinguished himself for valor or wisdom.

*A third characteristic* of a clan is thus reached: A clan is a body of kindred having a tutelar god, totemic or ancestral, who is considered to be the father of the clan.

When the clan is totemic it usually takes the name of its tutelar god as its name, and the picture-writing, or symbol of the tutelar god is used as a badge to distinguish the clan. That the members of a clan have descended from a common parent, seems at present to be usually a legal fiction. In tribal society age is greatly revered, and "elder-rule" largely prevails; so the gods are spoken of as "fathers," or more usually "grandfathers," or even "ancient fathers," and sometimes simply as "ancients," that is, "the venerable." But the tutelar god is especially the guide and protector of the clan, and is therefore called "father," and it seems that in many cases a myth is developed, explaining this fatherhood as being real. When the tutelar god is a real ancestor (and such seems to be the case when the clan is agnatic) the clan takes the name of the ancestor.

*A fourth characteristic* of a clan is therefore reached: A clan is a body of kindred having a common name, the name of its tutelar deity.

The clan, whether enatic or agnatic, is composed of brothers and sisters in each generation; and in the custom-law of this stage of culture brothers and sisters cannot intermarry. In like manner, when the clan is enatic, by the same custom-law a mother cannot marry her son, natal or fictitious; and when the clan is agnatic a father cannot marry his daughter, natal or fictitious. Thus it is that marriage within the enatic or agnatic group is incest, and is usually punished with death. The rules for marriage outside of the clan are various, and the subject need not here be entered upon. It is sufficient to note that the group is exogamous. It will be seen that the term "exogamy" is here used in a sense altogether different from that given it by McLennan and the writers of his school.

*The fifth characteristic* of a clan, therefore, is reached: A clan is a group of exogamous kindred.

As a clan is a brother-group and sister-group in each generation, though these ties are in small part real, and in large part artificial, yet they are considered to be the closest, and to combine the group into the firmest union. The body, therefore, constitutes a feud-group to secure one another's rights and to avenge one another's wrongs. The clan is held responsible by the tribe for the conduct of its members. All controversies arising within the clan are settled by the clan; controversies arising between members of different clans are settled by the tribe. For personal injury, especially for maiming and murdering, every clan holds every other clan responsible. Out of this arises the blood-feud, and out of blood-feud arises outlawry; for when a clan finds that one of its members has become so outrageous in his conduct that the other members no longer wish to hold themselves responsible therefor, the clan formally declares that the culprit no longer constitutes one of the community. The offender is expelled from the clan and becomes an outlaw, and any one may kill him.

*A sixth characteristic* of a clan has been reached: A clan is a feud-group of kindred.

In tribal society great wealth is not accumulated. The indirect personal relations which arise through property are of minor importance as compared with direct personal relations, which are regulated by kinship and relative age. The institution of personal property is very slightly developed, and such property, especially in the lower forms of tribal society, is destroyed at the death of the individual. It is a widely-spread law in savage society that personal property is inherited by the grave. The tenure to the greater part of property is communal, and inheres in the clan.

*A seventh characteristic* of a clan has therefore been reached: The clan is the chief property-holding group.

It has already been mentioned that elder-right, in some form or other, is universally recognized in tribal society. In general, *cæteris paribus*, the elder has authority over the younger, and in all tribal languages a special device is found to facilitate this custom, viz., individuals must always address each other by kinship terms in which relative age is expressed; thus, there is no general term for "brother," but a special term for "elder brother," and another for "younger brother." This elder-rule applies to the clan, as the eldest man of the clan is its chief, and such a chief, whose rulership is by right of superior age, will here be called the *presbyarch*.

*An eighth characteristic* of a clan has therefore been reached: A clan is a presbyarchy.

Let these characteristics be combined into a definition: A clan is one of the co-ordinate groups into which a tribe of cognatic people is divided, and is based upon enation or agnation, has a totemic or ancestral tutelar god, a common name for its members, is exogamous, is a feud-group, a proprietary group, and is ruled by a presbyarch.

There are many other characteristics of a clan that are found, now here, now there. For example, sometimes a clan will not eat the animal or some portion of the animal whose name it bears; it will thus have what is usually called a "taboo." Sometimes the several clans of a tribe will claim as their

own, particular hunting or fishing grounds. Sometimes a clan will have a body of personal names to be given to its members, which the clan claims as its own. Often a clan has a particular place assigned to it as the site for its residence or residences in the village group, and will occupy the same relative place in the village wherever the tribe may have a permanent or temporary residence. Thus there are many rights and duties which inhere in a clan and which may be said to characterize it. But the eight characteristics included in the above definition are these most commonly found. In the definition of the clan thus given, the tribe has been assumed to be of very simple structure—as composed of a number of co-ordinate clans. But this simple structure is not universal—in fact, a more complex structure is more common. Whenever a tribe has a more complex structure, the characteristics above enumerated may not all inhere in every one of a number of co-ordinate groups, but may be distributed among groups of different orders. It occasionally happens, also, that some of these characteristics are not found in any group. Some of these cases must next be considered.

Let one of the most frequent cases be taken first. Suppose that a tribe, becoming very large, divides in such a manner that segments from every one of the clans separate from the parent tribe and organize a new tribe with the same clans. Thus the clans found in the parent tribe are represented in the new tribe. Suppose that this fissiparous generation of tribes continues until there are five, ten, or twenty tribes, every one having the same clans as every other. Under such circumstances the same clan extends through many tribes, and any one tribe has in its body-politic no more than a segment of any clan; but every tribe is composed of like segments. Now, such a uniform division of tribes is rarely found. The division is usually more irregular, from the fact that the departing body which is organized into a new tribe usually takes with it segments of only a part of the clans; and as these divisions occur from time to time, no two tribes are likely to have representatives of exactly the same clans, and it may sometimes happen that two tribes may be found in the same body of cognate

tribes that will have entirely diverse clans. The segmentation of clans in this manner complicates the definition of a clan. It is no longer one of the co-ordinate groups of a tribe. These co-ordinate groups are but segments of clans, and each such segment is likely to become a distinct feud-group and a distinct proprietary group. Sometimes in such a case all the segments will yet recognize one presbyarch, but oftener a distinct presbyarch for each segment is developed. Enatic or agnatic distinctions, the common tutelar god, the common name and the characteristic of exogamy are more likely to remain permanent.

This fissiparous generation of tribes leads to a complication in the definition of the term "tribe," as such cognate tribes are likely to unite into confederacies, with a council and a chief presiding over the larger body thus constituted; and in the various changes which may be wrought upon the different groups of several orders in a confederacy by many redistributions of characteristics, it sometimes becomes difficult to say just what order of groups shall be called tribes. Confederacies also form alliances, and though they are apt to leave the confederacies or tribes of which they are composed independent and autonomous, except for offensive or defensive purposes against more foreign peoples, they doubtless sometimes continue and become more thoroughly cemented by the development of kinship ties and governmental organizations.

Sometimes clans divide into sub-clans, while yet remaining in the same tribe. The nature of this division in enatic clans is not clearly understood. It may be that it does not occur normally but that the apparent instances are due to the *recoalescing* of tribes. Be this as it may, it occurs with agnatic clans. Agnatic clans may be ruled by a presbyarch, and may be divided into segments, each one of which is ruled by a patriarch, the patriarchies being subordinate groups within a presbyarchal agnatic clan. Under these circumstances, however, the authority of the presbyarch is likely to wane, and the patriarchies are likely to be more enduring, and so the clan is divided into sub-clans. Thus it happens that the presbyarchy is not always a characteristic of a clan.

Again, the members of enatic clans do not always have a common name. This has been found true of most of the Shoshonian tribes of North America, of the Wintuns, and of other peoples in the western portion of the United States. Whether a common name was never used, or whether such common names have been lost in the flux of time is uncertain. A common name, therefore, is not an invariable characteristic of a clan.

The most enduring characteristics of a clan, therefore, are these: enatic or agnatic kinship, exogamy, and feud-protection. But even these may be distributed among different groups; so that the ideal definition of a clan above given will apply in all its parts to but few clans; yet in most of its parts it will apply to nearly all clans. But there are cases when these characteristics are so distributed through the various groups of a body-politic that it will be well-nigh impossible to decide which should be called the clan. Under such circumstances it perhaps will be best to apply the term "clan" to the group based upon enation or agnation, as the case may be, and perhaps it will always be found that such a group is exogamous.

In Australia there seems to be another complication. Fison and Howitt describe a very peculiar condition of affairs which seems to extend through many of the tribes of that great island. Among them, marriage within a prescribed group still remains. Enatic kinship, a tutelar god, and a common name still attach to the clan, but clans are divided into many segments constituting the different tribes. It seems also that a limited marriage, or the right to temporary sexual association, is still communal. It seems further that two or more systems of tribes are in somewhat the same stage of institutional culture. These different systems of tribes appear not to be cognate, or, if cognate, they are very remotely so. But having been long associated, and having common institutions in the respects above named, the clans in the different non-cognate tribes have become assimilated, so that a clan with a totemic name in one group of tribes has come to be considered as the equivalent of another clan having another totemic name in another group

not cognate to the first; that is, the clan of one group is supposed to be equivalent to the clan of another group, and temporary marriage rights extend across the lines which demarcate non-cognate groups.

Some of the Australian clans present another interesting variation. It must be understood that a clan is composed of a lineal series of brother-groups, one for each generation, together with a lineal series of sister-groups, one for each generation. In the case under consideration the series of brother-groups is distinguished from the series of sister-groups by a different name. Thus the clan is divided, the males from the females, and the enatic kindred are separated into two groups, the daughters falling into the group of their mothers, and the sons falling into the group of their mothers' brothers.

Still other tribes in Australia have a clan system in which the brother-group of one generation is distinguished from the brother-group of the next generation by a different name, but the brother-group of the third generation takes the name of the brother-group of the first generation. The same change of names occurs in the series of sister-groups. The grandmother belongs to a group having the same name as the granddaughter.

The typical tribe which has been described, is a body of kindred divided into brother and sister groups, every group having some kinship with every other group. Marriage is without the clan but within the tribe, therefore a man cannot marry into his own sister-group, but must marry into some cousin-group. To the consanguineal tie an affinital tie is added. A male cousin becomes the husband, and a female cousin becomes the wife. In many cases the brother-group of the husband becomes a husband-group, and the sister-group of the wife becomes a wife-group. The brother-group of the husband is related to all the other groups of the tribe, and the sister-group of the wife is also related to all the other groups of the tribe. It is interesting to study the effect which marriage (real or potential) has in changing the consanguineal kinships into affinital kinships. Among the tribes of North America there is much diversity in this respect, but the subject is too much burdened with details to be considered here.

It has been stated above that clans are organized on two different principles, namely, on enatic kinship and on agnatic kinship. Some years ago the Director proposed that the enatic group be called a *clan*, and the agnatic group a *gens*, and this suggestion has been followed by Mr. Dorsey, who therefore treats of the *gens* in Omaha Sociology.

A tribe cannot be developed through the expansion of a clan. The clan is not the antecedent of the tribe, nor is the tribe the antecedent of the clan. A clan is an integral part of a tribe, and there is no tribe without the clans of which it is composed, and no clan without the tribe of which it is a part. The communal family seems to be the antecedent of the tribe; but a single communal family could not develop into a tribe. A tribe seems to have primitively been a federation of communal families. Whatever its primitive origin, the special organization of any particular tribe must have been accomplished by combining bodies-politic that were previously distinct, and the basis of federation must have been one of intermarriage. In the simplest form two such distinct bodies could unite by making an agreement that the women of each should become the wives of the other. If three bodies-politic combine, the women of A might become the wives of the men of B, the women of B wives of the men of C, and the women of C wives of the men of A. In the thirty-fourth chapter of Genesis we read:

"And Hamor the father of Shechem went out unto Jacob to commune with him.

* * * * * * *

"And Hamor communed with them, saying, The soul of my son Shechem longeth for your daughter: I pray you give her him to wife.

"And make ye marriages with us, and give your daughters unto us, and take our daughters unto you.

"And ye shall dwell with us: and the land shall be before you; dwell and trade ye therein, and get you possessions therein."

The essence of tribal organization is this: The institution of a tribe is an institution for the regulation of marriage; and hence marriage is primitively by prescription. But the selection of wives by legal appointment ultimately develops into selection by personal choice, and tribal organization is greatly modified thereby.

A definition of the term "law," that will hold good under all circumstances, must be divested of the many theories of its origin, the source of its authority, and its ethical characteristics, which are expressed or implied in customary definitions, and laws must be considered as objective facts. The following definition will perhaps do under all circumstances: *A law is a rule of conduct which organized society endeavors to enforce.*

In civilization, law is theoretically founded on justice; but in savagery, principles of justice have little consideration. There are two fundamental principles at the basis of primitive law: viz., first, controversy should be prevented; second, controversy should be terminated. A third is derivative from them; namely, infraction of law should be punished. These principles enter into primitive law in many curious ways.

It was customary among the tribes of North America for individuals to mark their arrows, in order that the stricken game might fall to the man by whose arrow it had been despatched.

A war-party of Sioux surprised a squad of sleeping soldiers, who were all killed at the first volley from the Indians. Their arms, blankets, and other property were untouched, because, the attacking party being large, it could not be decided by whose bullets the soldiers were killed.

It has been widely believed that the practice of placing the property of deceased persons in their graves when they are buried has its origin in religion, and testifies to the universal belief that the dead live again, and will need such articles in their new life. But many tribes of North America who have not yet been long in contact with white men avow that, there being no owner for the property, its disposition might lead to controversy, and hence it is destroyed. Many examples of this fact have been collected. Ownership to the greater part of property in savagery is communal, some classes of property being owned by the clan, others by the tribe; and for such there is no proper inheritance, as the clan and tribe do not die; but purely personal property is inherited by the grave. It seems probable that such is the origin of the custom of bury-

ing various articles with the dead. Subsequently it has religious sanctions thrown about it, as have many social customs.

There is a law, among the tribes of North America, that superior age gives authority. This law is widely spread, and perhaps universal, and exercises a profound influence in tribal society, as the occasions for its applications are multifarious. No man knows his own age; but every man, woman, and child in the tribe knows his relative age to every other person in the tribe—who are older and who are younger than himself—for, in addressing any other person in the tribe, he must necessarily use a term which implies that the person addressed is older or younger. The law that authority inheres in the elder is a simple and ingenious method of preventing controversy.

The above is the explanation of another custom observed among savage tribes; namely, that it is illegal to address a person by his proper name. Kinship terms are used in direct address, proper names in speaking of a third person. It is hardly necessary to state that by this device controversy is prevented.

An interesting form of outlawry exists among some tribes. When a man has frequently involved his clan in controversy with other clans by reason of quarrels or other outrageous conduct, his own may decide no longer to defend him, and will formally announce in tribal council that such person is no longer under their protection. If the person thereafter by his conduct maltreats any member of the tribe, the injured party may do as he will with the offender, and not be held accountable by the kindred of the outlaw.

The few illustrations here given are sufficient, perhaps, to make clear what is meant by the statement that a large class of savage laws are designed to prevent controversy. Many other illustrations might be given, for they are found on every hand.

Three especial methods of terminating controversy are widely spread among the tribes of North America.

When controversy arises in relation to ownership, the property is usually destroyed by the clan or tribal authorities. Thus, if two men dispute in bartering their horses, a third steps

in and kills both animals. It seems probable that the destruction of property the ownership of which is in dispute is common to all tribes.

A second method of ending controversy is by the arbitrament of personal conflict For example: if two persons disagree and come to blows (unless the conflict end in the maiming or killing of one of the parties), it is considered a final settlement, and they cannot thereafter appeal to their clans for justice. By conflict a controversy is barred. This law seems to be universal.

The third method of terminating controversy is by the establishment of some day of festival—sometimes once a month, but usually once a year—beyond which crimes do not pass. The day of jubilee is a day of forgiveness. The working of this principle might be illustrated in many ways.

Law begins in savagery through the endeavor to secure peace, and develops in the highest civilization into the endeavor to establish justice.

Society is organized for the regulation of conduct, and conduct is regulated by law in the several stages of human progress in relation to those particulars about which serious disagreement arises. In the early history of mankind it appears, from all that we may now know of the matter, that the most serious and frequent disagreements arose out of the relations of the sexes. Men disagreed about women, and women about men. Early law, therefore, deals to a large extent with the relations of the sexes. The savage legislator sought to avoid controversy by regulating marital relations; and this he did by denying to the individual the right of choice, and providing that certain groups of men should take their wives from certain groups of women, and, further, that the selection of the woman should not be given to the man, nor the selection of the man to the woman, but that certain officers or elder persons should make the marriage contract. This method of selection is here called legal appointment.

Now, selection by legal appointment exists among all North American tribes, and elsewhere among savages in Australia and other portions of the globe; it exists in diverse forms,

which may not here be recounted for want of space. But the essential principle is this: in order that controversy may be avoided, marriage selection is by legal appointment, and not by personal choice.

But the second fundamental principle of primitive law greatly modifies selection by legal appointment, and gives rise to three forms of marriage, which will be denominated as follows: first, marriage by elopement; second, marriage by capture; third, marriage by duel.

It very often happens in the history of tribes that certain of the kinship groups diminish in number, while others increase. A group of men may greatly increase in number, while the group of women from whom they are obliged to accept their wives diminishes. At the same time another group of women may be large in proportion to the group of men to whom they are destined. Under these circumstances, certain men have a right to many wives, while others have a right to but few. It is very natural that young men and young women should sometimes rebel against the law, and elope with each other. Now, a fundamental principle of early law is that controversy must end; and such termination is secured by a curious provision found among many, perhaps all, tribes. A day is established, sometimes once a moon, but usually once a year, at which certain classes of offenses are forgiven. If, then, a runaway couple can escape to the forest, and live by themselves till the day of forgiveness, they may return to the tribe and live in peace. Marriage by this form exists in many of the tribes of North America.

Again, the group of men whose marriage rights are curtailed by diminution of the stock into which they may marry, sometimes unite to capture a wife for one of their number from some other group. It must be distinctly understood that this capture is not from an alien tribe, but always from a group within the same tribe. The attempt at capture is resisted, and a conflict ensues. If the capture is successful, the marriage is thereafter considered legal; if unsuccessful, a second resort to capture in the particular case is not permitted, for controversy must end. When women are taken in war from alien tribes

they must be adopted into some clan within the capturing tribe, in order that they may become wives of the men of the tribe. When this is done, the captured women become by legal appointment the wives of men in the group having marital rights in the clan which has adopted them.

The third form is marriage by duel. When a young woman comes to marriageable age, it may happen that by legal appointment she is assigned to a man who already has a wife, while there may be some other young man in the tribe who is without a wife, because there is none for him in the group within which he may marry. It is then the right of the latter to challenge to combat the man who is entitled to more than one, and, if successful, he wins the woman; and by savage law controversy must then end.

All three of these forms are observed among the tribes of North America; and they are methods by which selection by legal appointment is developed into selection by personal choice. Sometimes these latter forms largely prevail; and they come to be regulated more and more, until at last they become mere forms, and personal choice prevails.

When personal choice thus prevails, the old regulation that a man may not marry within his own group still exists; and selection within that group is incest, which is always punished with great severity. The group of persons within which marriage is incest is always a highly artificial group; hence, in early society, incest laws do not recognize physiologic conditions, but only social conditions.

The above outline will make clear the following statement, that endogamy and exogamy, as originally defined by McLennan, do not exist. Every savage man is exogamous with relation to the class or clan to which he may belong, and he is to a certain extent endogamous in relation to the tribe to which he belongs, that is, he marries within that tribe; but in all cases, if his marriage is the result of legal appointment, he is greatly restricted in his marriage rights, and the selection must be made within some limited group. Exogamy and endogamy, as thus defined, are integral parts of the same law,

and the tribes of mankind cannot be classed in two great groups, one practicing endogamy, and the other exogamy.

The law of exogamy is universal. Among all peoples there is a group, larger or smaller, and natural or artificial, within which marriage is prohibited. Exogamy is a derivative institution; its antecedent is marriage by legal appointment within a prescribed group. Marriage by prescription falls, but marriage within the enatic or agnatic group is still considered incest. Until, therefore, the right of marriage extends to all clans but that of the individual himself, exogamy is not fully established.

This may be restated: The primitive institution is marriage by prescription; this develops into marriage by personal choice. But there remains as a survival from the primitive institution a prohibition which may be called exogamy, the violation of which is a crime called incest.

Tribal society is of great antiquity; and in the vicissitudes of tribal life kinship society has undergone many changes, though these changes are restricted to narrow limits. Yet, within these limits the changes are very many, and the subject is thereby greatly complicated, and cannot be understood without long and careful research Passing travelers can no more set forth the institutions of tribal society than they can give a proper description of the flora of a country, the fauna of a region, or the geologic structure of a continent.

## PREHISTORIC TEXTILE FABRICS OF THE UNITED STATES, BY WILLIAM H. HOLMES.

This paper is complementary to the preceding one by Dr. Matthews. The latter describes an existing industry which has been long continuously practiced in an Indian tribe with but little influence from civilization, while Mr. Holmes has reproduced the details of the same industry as in prehistoric activity from fragments of pottery, most of them undoubtedly ancient. The ingenious method of discovery arose from the observation that nets or sacks of pliable material had evidently been used in the construction of many vessels taken from the mounds of the United States in or upon which fabrics such

vessels had been built. They had been generally applied to the surface of the vessels, sometimes covering the entire exterior and sometimes only the body or parts of it. The interior surface was occasionally subjected to similar application. The impressions left in the soft clay, remaining after the process of burning or drying, permanently preserved evidence of the nature and details of texture of the fabrics used, and from these impressions Mr. Holmes, with minute precision and certainty, exhibits illustrations and descriptions of the ancient textile art. The various methods of fabrication were in all cases verified through the assistance of Miss Kate C. Osgood, employed in the Bureau, who successfully reproduced in cord by simple appliances all the varieties that had been discovered and portrayed by the author's artistic skill.

The forms are presented in clearly arranged groups, their geographic distribution being noted, with comparisons of similar fabrics, ancient and modern, found in several parts of the world. The extent to which the marks at first produced by the requirements of construction became evolved into ornamentation is also discussed.

An important deduction made by Mr. Holmes from this discovery is that the illustrated and described work of the people who built the mounds, though varied and ingenious, shows that none of its characteristics were, in execution or design, superior to or specifically different from the work of the historic and modern Indian. This eliminates one more source of error cherished by lovers of the mysterious to establish and exalt a supposed race of "Mound Builders."

### CATALOGUE OF COLLECTIONS MADE DURING THE FIELD SEASON OF 1881, BY WILLIAM H. HOLMES.

This catalogue notes the most important portions of the objects collected during the year from mounds and other places of deposit, not including those from New Mexico and Arizona. Its primary classification is by locality with material as secondary. The localities represented are chiefly in North Carolina, Tennessee, Arkansas, Ohio, Oregon, Kentucky, and Missouri. The materials are stone, pottery, clay, shell, metal,

and several vegetal and animal substances, the latter including human remains.

The descriptions by Mr. Holmes are enriched by judicious comparisons and discriminative notes. With the aid of the numerous illustrations, students unable to have access to the National Museum are provided with a large amount of material for study of the evolution of forms and ornamentation in art, as also for suggestions in mythology and ethnic relations.

### CATALOGUE OF THE COLLECTIONS FROM NEW MEXICO AND ARIZONA, IN 1881, BY JAMES STEVENSON.

An account has been given above of the field-work of the party in charge of Mr. Stevenson by which this large collection of nearly five thousand specimens has been secured. It is sufficient to characterize it as illustrating the whole social domestic and religious life of one of the most interesting tribes. A valuable feature of the catalogue is the presentation, through the assistance of Mr. Frank H. Cushing, of the Indian names of many of the objects, thus through etymology assuring accuracy as to their use and origin.

## ON ACTIVITAL SIMILARITIES.

Some remarks on the interpretation of activital similarities seem to be called for here, from the fact that inferences appear in the papers of this volume which although ingenious and suggestive may perhaps not be in harmony with sound principles of interpretation.

Those who survey human activities over a broad field, from land to land and from people to people, discover very many unexpected similarities, and are apt to take them as suggestions of genetic relationship existing between the peoples among whom such similarities are found. Much research has been devoted to the classification of peoples and the complementary study of ethnic characteristics, and the similarities mentioned have been used for such purposes in many and diverse ways.

The conditions of life and progress under which man inhabits the globe are largely homogeneous in the various regions which he occupies. Within this general homogeneity there is a variety in conditions of habitat, confined to somewhat narrow limits. All men obtain their subsistence from biotic life; all men protect themselves from the inclemency of the weather; all men defend themselves from enemies; where men have lived near streams and other bodies of water they have constructed rafts and boats by which they may float on its surface. And in a broad survey of human activities we find men everywhere to a large extent performing the same functions. These functional similarities are so common that they do not challenge attention. On the other hand, the means by which activital functions are performed are more varied. The savage by the sea-shore may use a shell for a knife; the savage by the obsidian cliffs may use a stone flake for a knife. The savage who dwells among the hills of steatite uses stone vessels; the savage who lives by the banks of clay makes vessels of pottery. The savage living among the glacial fields of the north constructs his shelter of ice; the savage who inhabits the deep forest constructs a shelter of wood; the savage who roams the

plains with the buffalo constructs his shelter of skins; the savage who lives on the shore of the reedy lake constructs his shelter of tules; the savage who lives among the rocks builds him a house of loose stones. These diverse means for accomplishing the same ends apply not only to the arts of man but also to his institutions, his languages, and his opinions. It is to these organic similarities in the activities of mankind that attention is here drawn. Such similarities may exist with varying degrees of resemblance. Knives may resemble each other because they are made of stone; knives made of different materials may have resemblance in form. And all such resemblances may be very close or may be even far-fetched.

Similarities may be *autogenous* or *syngenous;* that is, the similar phenomena may have been developed independently or they may have a common origin.

Autogenous similarities may be due to *concausation,* or they may be entirely *adventitious.* Syngenous similarities may be due to *cognation* or to *acculturation.* Some illustration of the meaning of this statement may be necessary.

Throughout the world many tribes still existing are known to use or to have used stone implements, say, for example, stone arrow-heads. With relation to this fact we may suppose that various tribes developed the use of the stone arrow-head independently, in which case the art would be autogenous from many centers; that is, like conditions developed this art in its several centers of origin. The hypothesis is that the origin of the stone arrow-head art in many places throughout the earth was due to concausation. But it is possible for us to suppose that there was but one origin for the art, and that the people who practice it were one, in some remote past time, and that they have spread throughout the earth since that time, and that they now practice the art because they are cognate peoples and inherited it from common ancestors. The arts of these various peoples would thereby be syngenous. Again, as the art is expressed in material form, it is possible to suppose that it spread from people to people, that one tribe learned it of another until it was distributed throughout the earth. In this case many tribes would have the art by acculturation. Now, with regard

to widely diffused arts of this character, the utilities and purposes of which are obvious, it is usually assumed that they are autogenous in different regions among different peoples, that they may have developed from several centers; and this would not exclude the hypothesis that many tribes learned such arts by imitation, *i. e.*, by acculturation.

Now let us suppose that the stone arrow-head art had been discovered only in one tribe, say in British America, and that it was generally supposed to be peculiar to such tribe. Then suppose further that an anthropologist should discover this same art in a tribe of Mexico. Under such circumstances the first interpretation put upon it would be that these two tribes originally constituted one people, and that the art practiced by them was inherited from common ancestors. Seeking for further confirmation of this, if it was found that the two peoples spoke the same language, or allied languages, this hypothesis would be strengthened; if it was found that they had other arts in common, that their institutions were alike in many respects, and that their mythologies were substantially the same, the view that the two tribes belong to the same stock would be accepted. But if no other important affinities between the tribes were discovered, such a theory would be abandoned, and explanation would be sought elsewhere. The next most plausible hypothesis would be that these peoples had been associated, and that one had acquired the art from the other. But if no evidence was discovered of a former association, the anthropologist would seek for explanation of the common art in the environment, the conditions of life surrounding the two peoples, supposing that these instances of the practice of a common art had a common cause.

Among the Iroquoian Indians the members of a tribe or of a clan are accustomed to address each other by kinship terms, and it is considered an offense to address a man by his proper name. In these kinship terms this peculiarity is discovered, that a kinship name conveys also an idea of relative age. This is very simple in the case of father and son, or in the case of uncle and nephew; but for the common noun "brother" two terms are used, one signifying elder brother and the other younger brother. For the common noun "cousin" two terms

are likewise used. Thus in the body of kinship terms relative age is usually expressed. It is found among these same tribes that within a clan or other body of kindred superior age confers authority, and as people in this stage of culture have no record of births, and have such a limited arithmetic that ages are not kept, so that a man never knows his age, this linguistic device serves a valuable purpose. Among the Algonkian tribes the same phenomena are discovered, and kinship terms express relative age, and within certain limits authority inheres in seniority. The same thing is true among the Wintun Indians of California, among the Shoshonian Indians of Utah, among the Athabaskan Indians, and in every tribe that has yet been investigated in North America. The same phenomena are observed in the tribes of South America, in Australia, in Africa, and Asia, and even to some extent in Europe; and we know historically that peoples who have passed beyond the grade of savagery once had such a system of kinship names. It would appear from this that in savage society the legislators or council-men established customary laws regulating personal relations, by which under certain conditions the elder should exercise authority or control over the younger. It is a very simple method of regulating personal relations, quite in consonance with what we know of the methods of reasoning among savage peoples. In order that this rule should be observed it was a very obvious and simple plan to establish the further regulation that the individuals composing bodies of kindred should address each other by terms which claim or recognize this authority by the use of words expressing relative age. Now, we may suppose that such a custom, scattered as it is throughout the world, may have arisen at many independent centers. It may have been autogenous here and there; and it may, however, have been borrowed sometimes—one tribe may have learned it from another, and, thinking it a wise device, adopted it. But it seems probable, and most anthropologists would perhaps agree, that we ought to consider such a custom so widely spread as this as being substantially autogenous, and that it sprung up in its several centers of development from like causes, namely, the desire to regulate personal relations

within a body politic, and the belief that such personal relations ought to be regulated so as to confer authority upon the elder, because age is supposed to give wisdom.

Yet it is quite possible to suppose that this custom had its origin among a people far back in antiquity, and that this original people ultimately broke into segments and scattered from time to time throughout the habitable earth; and in this case this custom of the different tribes would have a syngenous origin; the custom would have come down to the tribes by cognation from the ancestral tribe who invented it. But such a supposition would not be very probable for many reasons. The tribes among which it is found speak very different languages, and belong to diverse stocks of language. The names used do not belong to one language or to one family of languages. No possible genetic relationship has yet been discovered between the languages or between these kindred terms as used among the different stocks of people where the custom prevails. To suppose, then, that the custom had an origin anterior to all of the languages spoken at the present time by the tribes among whom this phenomenon is discovered is not very reasonable. Again, we are led to believe from archæologic evidence that mankind was widely scattered throughout the habitable earth anterior to the development of known stocks of languages, and anterior to the development of any but the very rudest arts, and this supposition demands that we should believe that the institution should have been invented by a people yet devoid of organized speech, and almost devoid of all the arts of life. And we must further infer from this hypothesis that this institution, in its primitive simplicity, existed during all that period of time through which arts and institutions have had their growth to the present time. It will be safer, therefore, to conclude that this custom is autogenous by concausation in many centers. If we take a broader survey of the habits and customs of a people we shall find many other customs and regulations equally widespread; all of which we are compelled to believe are autogenous from various centers of origin. On the other hand many customs are found which are not so widely distributed, and the reasons for which

are not so manifest. In such cases they may yet be considered as autogenous from different centers, but many of them doubtless are syngenous. The people among which they are found can be traced back by linguistic or other evidence to common progenitors, and in such cases the institutions are syngenous by inheritance. Again, we have abundant evidence, in relation to institutions, that they are borrowed from time to time, and such institutions are syngenous by acculturation.

The study of linguistic similarities has been largely carried on, and important lessons may be derived therefrom. Functional similarities are very general, because certain classes of ideas are universal. Wherever the relation of father and son exists and is recognized, there must be words corresponding to "father" and "son." Wherever men have recognized that some things must be high and others low, corresponding terms must be used. Wherever anger is observed it is named; and wherever men walk, a term signifying "to walk" must be used. But it is not with functional similarities that we now deal, but only with the means or instrument by which functions are performed—that is, with organic similarities. Many languages have been studied and compared, and out of this comparison has resulted the establishment of many groups of cognate languages, called "families" or "stocks." But, as languages have been grouped into families where evidence of common origin has been discovered, so the families have been separated from each other for want of such evidence. They are considered to be autogenous—that is, to have been developed from distinct centers. During the course of this research certain rules have been established for the interpretation of linguistic similarities. To a large extent, similar words performing similar functions are believed to establish the relation of cognation between them. It is on this basis that the various languages of the Aryan family, stretching from Asia westward over Europe, and of course spoken by Europeans in America, are so related that they are believed to have had a common origin in some primitive language, now lost as such, but from which the peoples who speak the several languages composing

the stock have inherited the fundamental elements of their languages. These languages, then, are cognate, but there are many words in each which have not been derived from the primitive stock inherited by all, but which have been borrowed from other peoples with whom the Aryans have from time to time associated. Such words are similar by acculturation.

Many similarities are discovered in languages which have no cognate or cultural relation. In English we call a certain animal a "deer." In several Shoshone languages a deer is called "tia." When first heard among the tribes of Utah this word was supposed to have been borrowed from white men; but in some of the languages and dialects of the stock it is found that "tiats" is used, and "tiav" in others; and the three are therefore considered to be cognate with each other, but entirely a different word, and not to have been derived from the English "deer." The similarity is one of mere accident. Such accidental resemblances are often found, and tyro philologists frequently assemble them for the purpose of demonstrating linguistic relationship. Such adventitious similarities are discovered in all departments of human activities, and have no value for comparative purposes.

Many similarities in the opinions of men, as they are scattered over the world, are discovered. Lessons may be derived from these similarities as they appear in myths. Very many savage tribes believe that the winds are the breathings of mythic beasts. Of course savages recognize the fact that they can blow from their mouths, and they easily reach the childish conclusion that wind is breath; and tribes scattered widely throughout the earth might arrive at this common opinion; and such opinions are usually supposed to be concaused. Wherever primitive man, in the childhood of reasoning, reflected upon the origin of winds, he may have reached such a conclusion. Such opinions are manifestly concaused, and autogenous from many centers.

A second explanation of the origin of wind is found sometimes among savage tribes, but it is more frequently found among barbaric tribes. Among these peoples winds are interpreted as fannings, and in early hieroglyphic writing the four quar-

ters of the earth are frequently symbolized by four birds, from whom the north and south and east and west winds have their origin, and the winds are supposed to rise from under their wings. At this stage it must be remembered that the people have not yet discovered that there is a circumambient air which may be stirred or fanned, but fanning in this stage of culture is supposed to be a creation of something called the wind. This opinion is doubtless autogenous at many centers, and is concaused.

All along the course of culture scientific opinion, or real knowledge, has been gradually replacing mythic opinion, or pseudo knowledge. When the real nature of the wind was discovered by more advanced philosophers, such knowledge spread far and wide. True, it may have been discovered by different peoples at different times, but real knowledge spreads far more rapidly and widely than mythic opinion. Scientific opinion, therefore, is much more likely to obtain footing by acculturation than by concausation.

The foregoing explanation of various classes of similarities perhaps furnishes a sufficient basis for the following statements of certain principles of interpretation relating thereto:

1. The arts of life have their origin in the endeavor to supply physical wants. They result everywhere in primitive life from the utilization of the materials at hand. Many wants are universal, felt by all men in all lands. The want for a hammer is general; the use of a stone for a hammer would readily be suggested to the nascent mind of the lowest savage, and the stone-hammer art may have easily sprung up anywhere at any time. The use of stones for knives, for arrow-heads, for scrapers, and for a variety of other purposes, may easily have had many independent origins; and so on through almost the entire list of savage and barbaric arts which have been developed to supply the wants of life. With regard, then, to the arts of life, the presumption is in favor of independent origin by concausation.

2. In so far as arts are expressed in material forms they constitute simple object-lessons, easily learned, and observation would spread them far and wide. Whenever, therefore, the

origin of such an art cannot be explained by the principle of concausation, the presumption would be in favor of its origin by acculturation.

3. Institutions, languages, and opinions are not expressed in material forms, and do not so easily pass from place to place and from people to people. The presumption, therefore, is that similarities discovered in these three classes of activities are not derived by acculturation.

4. When many similarities among two or more peoples are discovered in institutions, languages, and mythic opinions, the presumption is that they all have a common origin in some ancient stock from whom the savage tribes have been derived.

5. When similarities in institutions are discovered between peoples not related in language, the presumption is that such similarities are autogenous by concausation.

6. When many verbal similarities are discovered among distinct peoples, the presumption is that they have a syngenous origin by inheritance; when few verbal similarities between different peoples are discovered, it becomes necessary to inquire into the history of the people to discover whether they have their origin in acculturation or in adventition.

7. When similarities in opinion are discovered among peoples, if such peoples belong to different linguistic stocks the presumption is that they have their origin in concausation.

8. When similarities in opinions are discovered in peoples of the same linguistic stock, it becomes necessary to inquire into the history of the peoples and to determine the period of their separation, and if such opinions are probably so primitive that it is reasonably to be supposed that they were entertained in the stage of culture in which the primitive stock existed, the presumption is in favor of the theory that the similarities are such by cognation.

9. When similarities of opinion are discovered between peoples speaking languages of the same stock, if such opinions properly belong to a stage of culture subsequent to the separation of a primitive stock, it is probable that such opinions had their origin in concausation.

Many other principles of interpretation applicable to activital similarities might be enunciated, but these seem to be the most fundamental, and are sufficient for present purposes.

## CLASSIFICATION OF EXPENDITURES MADE DURING THE FISCAL YEAR ENDED JUNE 30, 1882.

| Classification. | Amount expended. |
|---|---|
| A.—Services | $18,232 57 |
| B.—Traveling expenses | 1,231 08 |
| C.—Transportation of property | 156 27 |
| D.—Field subsistence | 1,147 19 |
| E.—Field supplies and expenses | 161 41 |
| F.—Field material | 39 75 |
| G.—Instruments | 0 |
| H.—Laboratory material | 0 |
| I.—Photographic material | 96 00 |
| K.—Books and maps | 221 25 |
| L.—Stationery and drawing material | 38 19 |
| M.—Illustrations for reports | 12 00 |
| N.—Office rents | 0 |
| O.—Office furniture | 1,258 24 |
| P.—Office supplies and repairs | 43 05 |
| Q.—Storage | 0 |
| R.—Correspondence | 6 14 |
| S.—Articles for distribution to Indians | 1,810 52 |
| T.—Specimens | 546 34 |
| Total | 25,000 00 |

# ACCOMPANYING PAPERS.

SMITHSONIAN INSTITUTION——BUREAU OF ETHNOLOGY

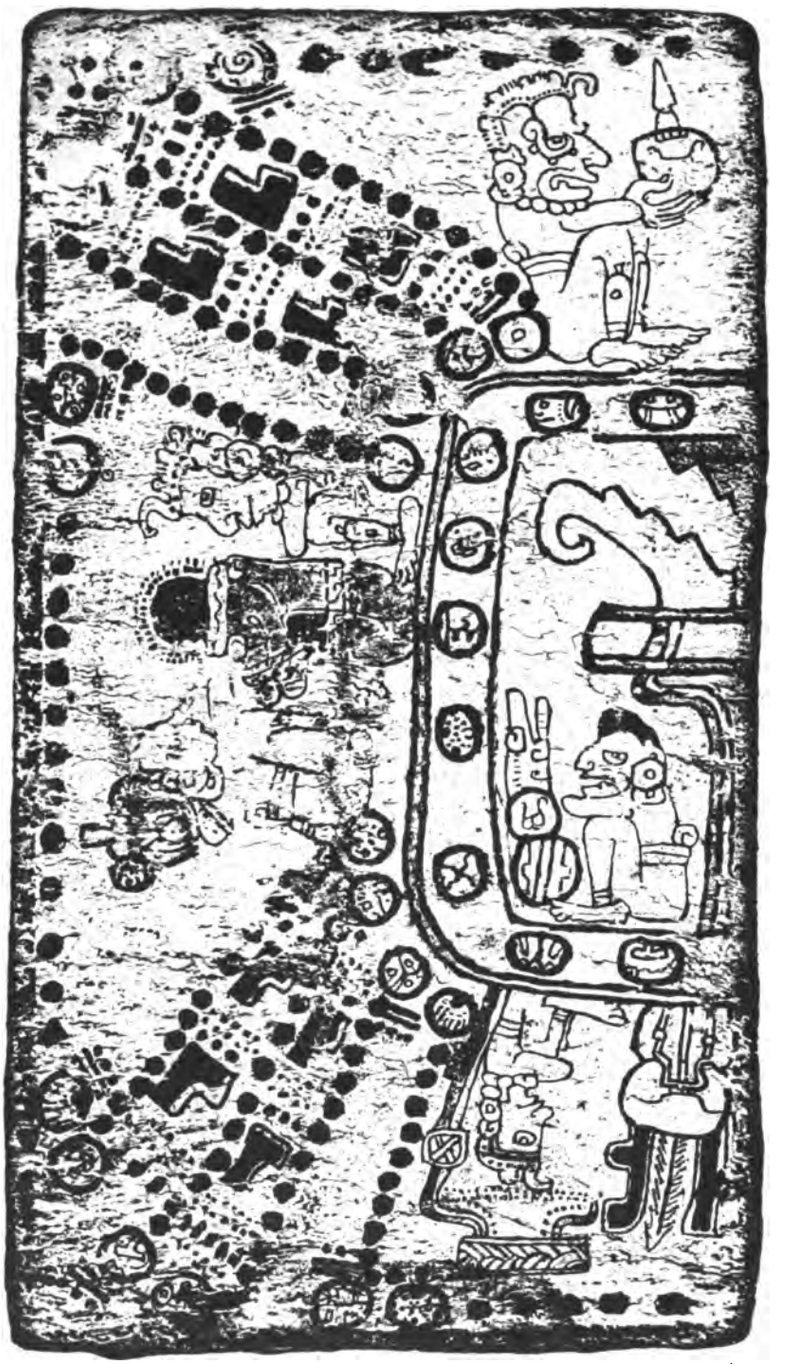
# NOTES

ON CERTAIN

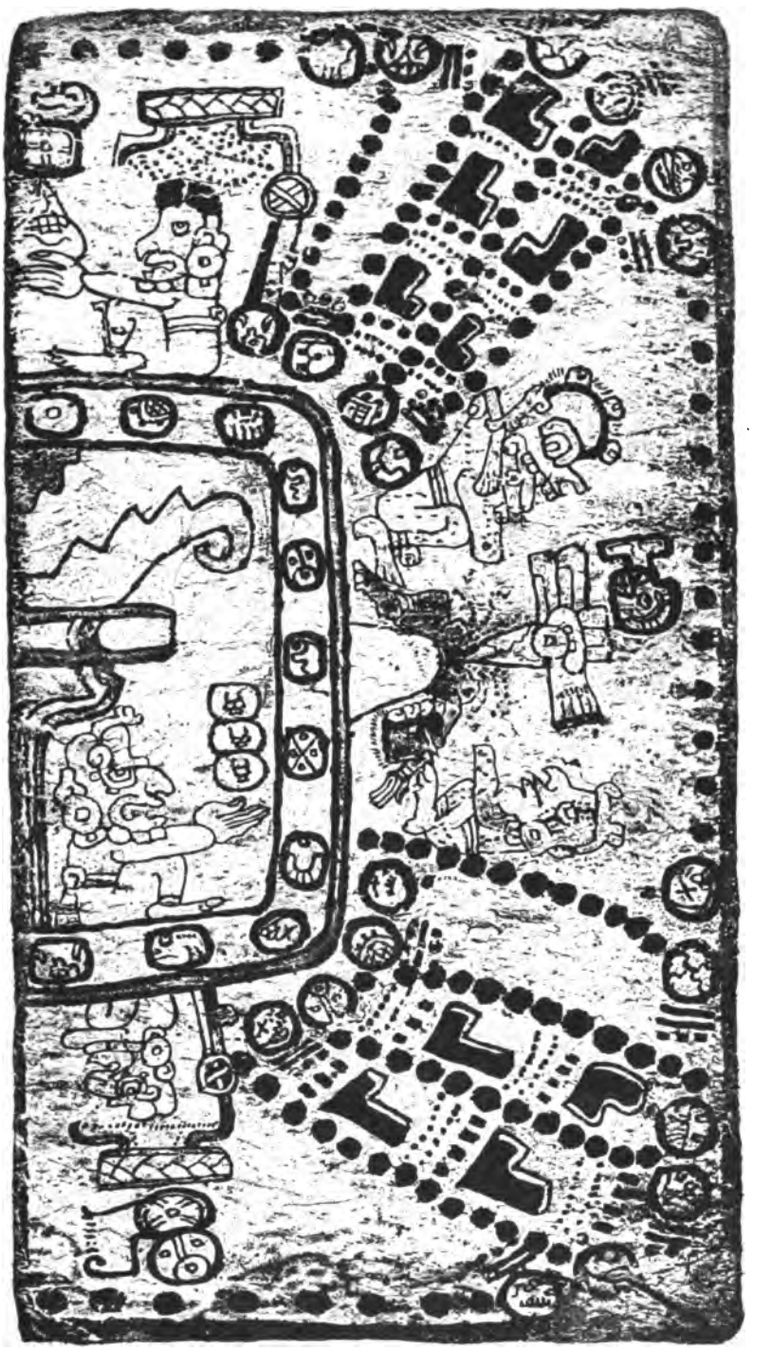
# MAYA AND MEXICAN MANUSCRIPTS.

BY

PROF. CYRUS THOMAS.



"TABLEAU DES BACA



DEX CORTESIANUS.

# NOTES ON CERTAIN MAYA AND MEXICAN MANUSCRIPTS.

By Cyrus Thomas.

## "TABLEAU DES BACAB."

Having recently come into possession of Leon de Rosny's late work entitled "*Les Documents ecrits de l'Antiquite Americaine*,"[1] I find in it a photo-lithographic copy of two plates (or rather one plate, for the two are but parts of one) of the Maya Manuscript known as the *Codex Cortesianus*. This plate (I shall speak of the two as one) is of so much importance in the study of the Central American symbols and calendar systems that I deem it worthy of special notice; more particularly so as it furnishes a connecting link between the Maya and Mexican symbols and calendars.

This plate (Nos. 8 and 9 in Rosny's work), is entitled by Rosny "*Tableau des Bacab*" or "Plate of the Bacabs," he supposing it to be a representation of the gods of the four cardinal points, an opinion I believe to be well founded.

As will be seen by reference to our Plate No. 1, which is an exact copy from Rosny's work, this page consists of three divisions: *First*, an inner quadrilateral space, in which there are a kind of cross or sacred tree; two sitting figures, one of which is a female, and six characters. *Second*, a narrow space or belt forming a border to the inner area, from which it is separated by a single line; it is separated from the outer space by a double line. This space contains the characters for the twenty days of the Maya month, but not arranged in consecutive order. *Third*, an outer and larger space containing several figures and numerous characters, the latter chiefly those representing the Maya days. This area consists of two distinct parts, one part containing day characters, grouped together at the four corners, and connected by rows of dots running from one group to the other along the outer border; the other part consisting of four groups of figures, one group opposite each of the four sides. In each of the four compartments containing these last-mentioned groups, there is one of the four characters shown in Fig. 1 (*a b c d*), which, in my "Study of the Manuscript Troano," I have concluded represent the four cardinal points, a conclusion also reached in. dependently by Rosny and Schultz Sellack.

[1] Published in 1882, as a memoir of the Société d'Ethnographie of Paris.

Before entering upon the discussion of this plate I will insert here Rosny's comment, that the reader may have an opportunity of comparing his view of its signification with the opinion I shall advance.

I intend to close this report with some observations on the criticisms which have been written since the publication of my "Essay on the Decipherment of the Hieratic Writings," as much regarding the first data, for which we are indebted to Diego de Landa, as that of the method to follow in order to realize new progress in the interpretation of the Katounic texts. I will be permitted, however, before approaching this discussion, to say a word on two leaves of the *Codex Cortesianus*, which not only confirm several of my former lectures, but which furnish us probably a more than ordinarily interesting document relative to the religious history of ancient Yucatan.

The two leaves require to be presented synoptically, as I have done in reproducing them on the plate [8 and 9[a]], for it is evident that they form together one single representation.

This picture presents four divisions, in the middle of which is seen a representation of the sacred tree; beneath are the figures of two personages seated on the ground and placed facing the katounes, among which the sign of the day *Ik* is repeated three times on the right side and once with two other signs on the left side. The central image is surrounded by a sort of framing in which have been traced the twenty cyclic characters of the calendar. Some of these characters would not be recognizable if one possessed only the data of Landa, but they are henceforth easy to read, for I have had occasion to determine, after a certain fashion, the value of the greater part of them in a former publication.

These characters are traced in the following order, commencing, for example, with Muluc and continuing from left to right: 6, 2, 18, 13, 17, 14, 5, 1, 16, 12, 8, 4, 20, 15, 11, 7, 19, 3, 9, 10. * * *

In the four compartments of the Tablet appear the same cyclic signs again in two series. I will not stop to dwell upon them, not having discovered the system of their arrangement.

Besides these cyclic signs no other katounes are found on the Tablet, except four groups which have attracted my attention since the beginning of my studies, and which I have presented, not without some hesitation, as serving to note the four cardinal points. I do not consider my first attempt at interpretation as definitely demonstrated, but it seems to me that it acquires by the study of the pages in question of the *Codex Cortesianus*, a new probability of exactitude.

These four katounic groups are here in fact arranged in the following manner:

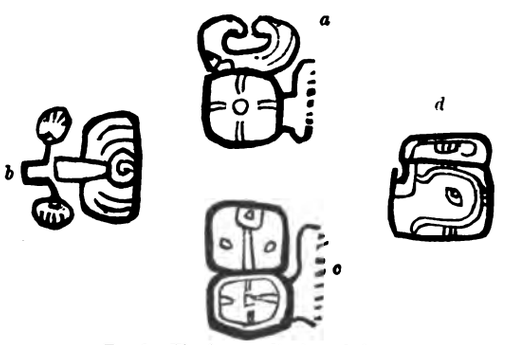



FIG. 1.—The four cardinal symbols.

Now, not only do these groups include, as I have explained, several of the phonetic elements of Maya words known to designate the four cardinal points, but they oc-

[a] Rosny says by mistake "Planche VII-VIII."

cupy, besides, the place which is necessary to them in the arrangement (orientation), to wit:

West.

South. North.

East.

I have said, moreover, in my *Essay*, that certain characteristic symbols of the gods of the four cardinal points (the *Bacab*) are found placed beside the katounic groups, which occupy me at this moment, in a manner which gives a new confirmation of my interpretation.

On Plates 23, 24, 25, and 26 of the *Codex Cortesianus*, where the same groups and symbols are seen reproduced of which I have just spoken, the hierogrammat has drawn four figures identical in shape and dress. These four figures represent the "god of the long nose.' Beside the first, who holds in his hand a flaming torch, appears a series of katounes, at the head of which is the sign *Kan* (symbol of the south), and above, a defaced group. Beside the second, who holds a flaming torch inverted, is the sign *Muluc* (symbol of the east), and above, the group which I have interpreted as east. At the side of the third, who carries in the left hand the burning torch inverted and a scepter (symbol of Bacabs), is the sign *Ix* (symbol of the north), and above, the group which I have translated as north. Finally, beside the fourth, who carries in his left hand the flaming torch inverted and a hatchet in the right hand, is the sign *Cauac* (symbol of the west), and above, not the entire group, which I have translated as west, but the first sign of this group, and also an animal characteristic of the Occident, which has been identified with the armadillo. I have some doubts upon the subject of this animal, but its affinity with the qualification of the west appears to me at least very probable.

We see from this quotation that Rosny was unable to give any explanation of the day characters, dots, and L-shaped symbols in the outer space; also that he was unable to suggest any reason for the peculiar arrangement of the day symbols in the intermediate circle or quadrilateral. His suggestions are limited to the four characters placed opposite the four sides, and which, he believes, and I think correctly, to be the symbols of the four cardinal points. Whether his conclusion as to the points they respectively refer to be correct or not, is one of the questions I propose to discuss in this paper. But before entering upon this, the most important question regarding the plate, I desire first to offer what I believe will be admitted to be a correct explanation of the object and uses of the day symbols, dots, &c., in the outer space, and the intermediate circle of day characters.

If we examine carefully the day characters and large black dots in the outer space we shall find that all taken together really form but *one continuous line*, making one outward and two inward bends or loops at each corner.

For example, commencing with *Cauac* (No. 31) (see scheme of the plate, Fig. 2), on the right side, and running upward toward the top along the row of dots next the right-hand margin, we reach the character *Chuen* (No. 32); just above is *Eb* (No. 33); then running inward toward the center, along the row of dots to *Kan* (No. 34); then upward to *Chicchan* (No. 35); then outward along the row of dots toward the

outer corner to *Caban* (No. 36); then to the left to *Ezanab* (No. 37); then inward to *Oc* (No. 38); then to the left to *Chuen* (No. 39); outward to *Akbal* (No. 40), and so on around.

Before proceeding further it is necessary that I introduce here a Maya calendar, in order that my next point may be clearly understood. To simplify this as far as possible, I give first a table for a single *Cauac* year, in two forms, one as the ordinary counting-house calendar (Table I), the other a simple continuous list of days (Table II), but in this latter case only for thirteen months, just what is necessary to complete the circuit of our plate.

As explained in my former paper,[3] although there were twenty days in each Maya month, each day with its own particular name, and always following each other in the same order, so that each month would begin with the same day the year commenced with, yet it was the custom to number the days up to 13 and then commence again with 1, 2, 3, and so on, thus dividing the year into weeks of thirteen days each.

For a full explanation of this complicated calendar system I must refer the reader to my former paper. But at present we shall need only an understanding of the tables here given. I shall, as I proceed, refer to Table I, leaving the reader who prefers to do so to refer to the list of days marked Table II, as they are precisely the same thing, only differing in form.

TABLE I.—*Maya calendar for one year*

| Nos. of the months. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cauac | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 |
| Ahau | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 |
| Ymix | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 |
| Ik | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 |
| Akbal | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 |
| Kan | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 |
| Chicchan | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 |
| Cimi | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 |
| Manik | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 |
| Lamat | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 |
| Muluc | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 |
| Oc | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 |
| Chuen | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 |
| Eb | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 |
| Been | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 |
| Ix | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 |
| Men | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 |
| Cib | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 |
| Caban | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 |
| Ezanab | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 |

TABLE II.

| 1ST MONTH. | 6. Kan. | 12. Oc. | 5. Cib. |
|---|---|---|---|
| 1. *Cauac.* | 7. Chicchan. | 13. *Chuen.* | 6. Caban. |
| 2. Ahau. | 8. Cimi. | 1. *Eb.* | 7. Ezanab. |
| 3. Imix. | 9. Manik. | 2. Been. | 2D MONTH. |
| 4. Ik. | 10. Lamat. | 3. Ix. | 8. Cauac. |
| 5. Akbal. | 11. Muluc. | 4. Men. | 9. Ahau. |

[3] A study of the Manuscript Troano.

10. Ymix.
11. Ik.
12. Akbal.
13. *Kan.*
1. *Chicchan.*
2. Cimi.
3. Manik.
4. Lamat.
5. Muluc.
6. Oc.
7. Chuen.
8. Eb.
9. Been.
10. Ix.
11. Men.
12. Cib.
13. *Caban.*
1. *Ezanab.*

3D MONTH.

2. Cauac.
3. Ahau.
4. Ymix.
5. Ik.
6. Akbal.
7. Kan.
8. Chicchan.
9. Cimi.
10. Manik.
11. Lamat.
12. Muluc.
13. *Oc.*
1. *Chuen.*
2. Eb.
3. Been.
4. Ix.
5. Men.
6. Cib.
7. Caban.
8. Ezanab.

4TH MONTH.

9. Cauac.
10. Ahau.
11. Ymix.
12. Ik.
13. *Akbal.*
1. *Kan.*
2. Chicchan.
3. Cimi.
4. Manik.
5. Lamat.
6. Muluc.
7. Oc.
8. Chuen.
9. Eb.
10. Been.
11. Ix.
12. Men.
13. *Cib.*
1. *Caban.*
2. Ezanab.

5TH MONTH.

3. Cauac.
4. Ahau.
5. Ymix.
6. Ik.
7. Akbal.
8. Kan.
9. Chicchan.
10. Cimi.
11. Manik.
12. Lamat.
13. *Muluc.*
1. *Oc.*
2. Chuen.
3. Eb.
4. Been.
5. Ix.
6. Men.
7. Cib.
8. Caban.
9. Ezanab.

6TH MONTH.

10. Cauac.
11. Ahau.
12. Ymix.
13. *Ik.*
1. *Akbal.*
2. Kan.
3. Chicchan.
4. Cimi.
5. Manik.
6. Lamat.
7. Muluc.
8. Oc.
9. Chuen.
10. Eb.
11. Been.
12. Ix.
13. *Men.*
1. *Cib.*
2. Caban.
3. Ezanab.

7TH MONTH.

4. Cauac.
5. Ahau.
6. Ymix.
7. Ik.
8. Akbal.
9. Kan.
10. Chicchan.
11. Cimi.
12. Manik.
13. *Lamat.*
1. *Muluc.*
2. Oc.
3. Chuen.
4. Eb.
5. Been.
6. Ix.
7. Men.
8. Cib.
9. Caban.
10. Ezanab.

8TH MONTH.

11. Cauac.
12. Ahau.
13. *Ymix.*
1. *Ik.*
2. Akbal.
3. Kan.
4. Chicchan.
5. Cimi.
6. Manik.
7. Lamat.
8. Muluc.
9. Oc.
10. Chuen.
11. Eb.
12. Been.
13. *Ix.*
1. *Men.*
2. Cib.
3. Caban.
4. Ezanab.

9TH MONTH.

5. Cauac.
6. Ahau.
7. Ymix.
8. Ik.
9. Akbal.
10. Kan.
11. Chicchan.
12. Cimi.
13. *Manik.*
1. *Lamat.*
2. Muluc.
3. Oc.
4. Chuen.
5. Eb.
6. Been.
7. Ix.
8. Men.
9. Cib.
10. Caban.
11. Ezanab.

10TH MONTH.

12. Cauac.
13. *Ahau.*
1. *Ymix.*
2. Ik.
3. Akbal.
4. Kan.
5. Chicchan.
6. Cimi.
7. Manik.
8. Lamat.
9. Muluc.
10. Oc.
11. Chuen.
12. Eb.
13. *Been.*
1. *Ix.*
2. Men.
3. Cib.

4. Caban.
5. Ezanab.

11TH MONTH.

6. Cauac.
7. Ahau.
8. Ymix.
9. Ik.
10. Akbal.
11. Kan.
12. Chicchan.
13. *Cimi.*
1. *Manik.*
2. Lamat.
3. Muluc.
4. Oc.
5. Chuen.
6. Eb.
7. Been.
8. Ix.
9. Men.
10. Cib.
11. Caban.
12. Ezanab.

12TH MONTH.

13. *Cauac.*
1. *Ahau.*
2. Imix.
3. Ik.
4. Akbal.
5. Kan.
6. Chicchan.
7. Cimi.
8. Manik.
9. Lamat.
10. Muluc.
11. Oc.
12. Chuen.
13. *Eb.*
1. *Been.*
2. Ix.
3. Men.
4. Cib.
5. Caban.
6. Ezanab.

13TH MONTH.

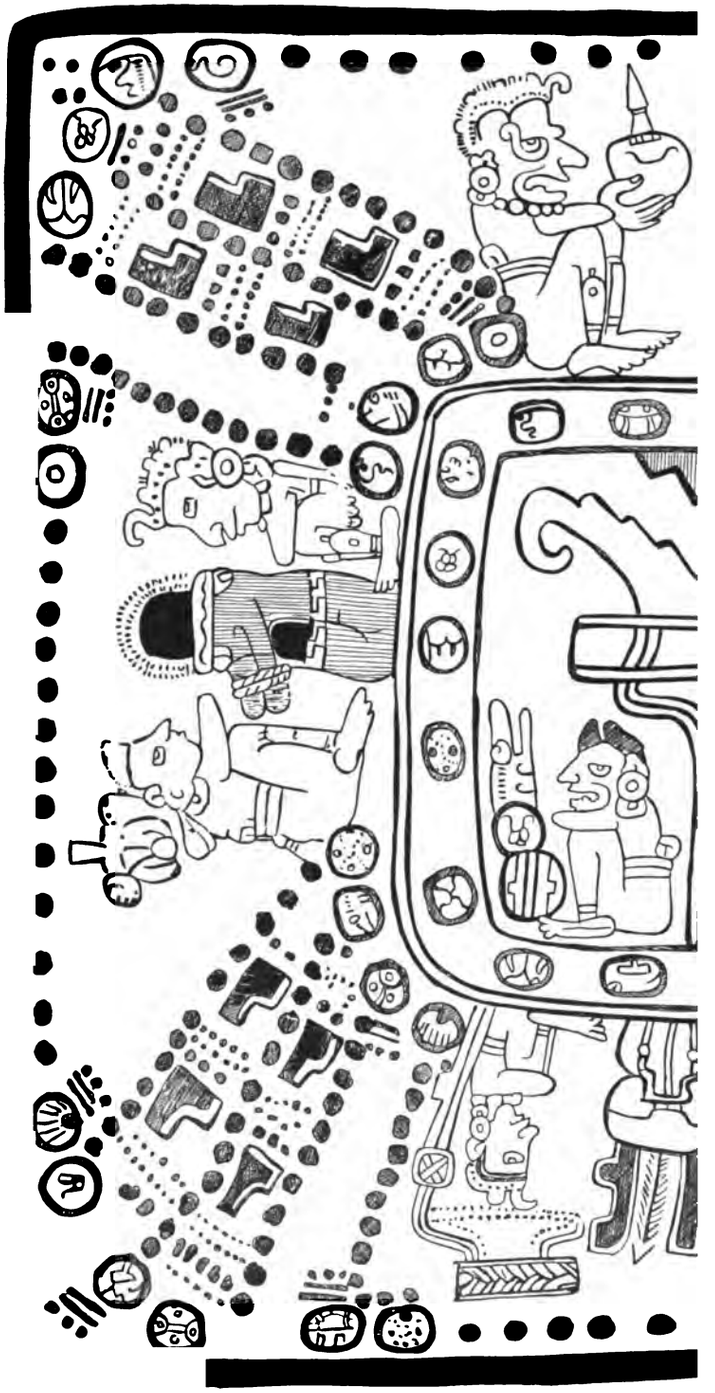
7. Cauac.
8. Ahau.
9. Ymix.
10. Ik.
11. Akbal.
12. Kan.
13. *Chicchan.*
1. *Cimi.*
2. Manik.
3. Lamat.
4. Muluc.
5. Oc.
6. Chuen.
7. Eb.
8. Been.
9. Ix.
10. Men.
11. Cib.
12. Caban.
13. *Ezanab.*

Now, let us follow around this outer circle comparing it with our calendar (Table I), or list of days (Table II), which, as before stated, are for the Cauac year only.

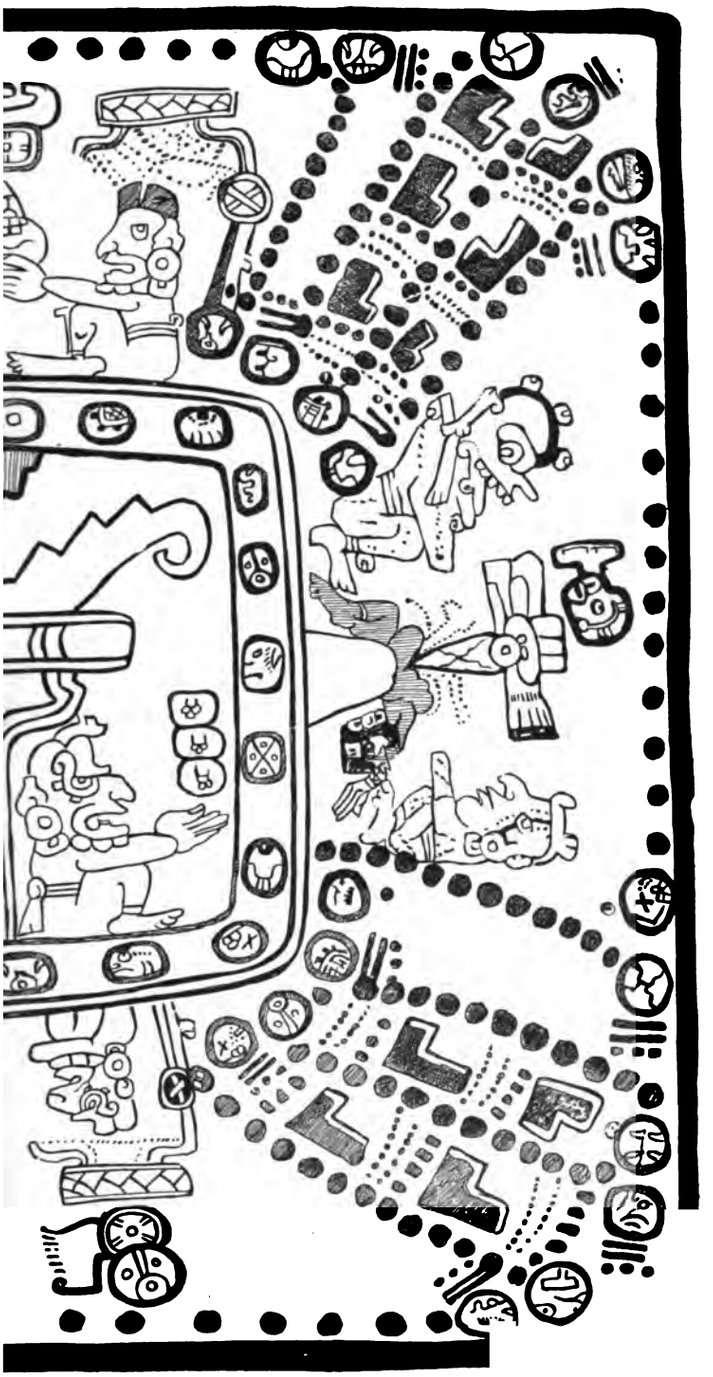
As this is a Cauac year, we must commence with the Cauac character No. 31, on the right border. Immediately to the left of this character and almost in contact with it we see a single small dot. We take for granted that this denotes 1 and that we are to begin with 1 *Cauac.* This corresponds with the first day of the first month, that is, the top number of the left-hand column of numbers in Table I or the first day in Table II. Turning to the plate we run up the line of dots to the character for *Chuen* (No. 32); immediately to the left of this we see two little bars and three dots $\overset{\bullet\bullet\bullet}{=\!=}$ or 13.

Turning again to our table and running down the column of the first month to the number 13 we find that it is *Chuen*, which is followed by 1 *Eb.* Turning again to the plate we observe that the character immediately above Chuen is *Eb.*, and that it has adjoining it below a single dot, or 1. Running from thence down the line of dots toward the center we reach *Kan*, immediately above which is the character for 13. Turning again to our table and starting with the 1 opposite *Eb* and running to the bottom of the column which ends with 7 and passing to 8 at the top of the second column, and running down this to 13, or following down our list of days (Table II), we find it to be *Kan*, which is followed by 1 *Chicchan.* On the plate we see the character for *Chicchan* (No. 35) immediately above that of *Kan* (No. 34), with a single small dot touching it above. Running from this upward along the row of large dots toward the outer corner we next reach the character for *Caban* (No. 36), adjoining which we see the numeral character for 13.

Running our eye down the second column of the table, from 1 opposite *Chicchan* to 13, we find it is opposite *Caban*, thus agreeing with what we find in the plate.



THE TABLEAU I



CAB RESTORED.

This will enable the reader to follow up the names and numbers on the table as I will now give them from *Caban* (No. 36), in the manner above shown, remembering that the movement on the plate is around the circle toward the left, that is, up the right side, toward the left on the top, down the left side, &c., and that, on the tables, after one column is completed we take the next to the right.

From *Caban* (No. 36) we go next to *Ezanab* No. 37 (the single dot is here effaced); then down the row of dots to *Oc*, No. 38, over which is the numeral for 13; then to *Chuen*, No. 39, immediately to the left (the single dot is dimly outlined immediately above it); then up the row of large dots to *Akbal* No. 40 (the numeral character for 13 is immediately to the right); then to *Kan* No. 1, immediately to the left (the single dot adjoins it on the right); then to the left along the border row of dots to *Cib* No. 2, in the upper left-hand corner, immediately under which we find the numeral character for 13.

Without following this further, I will now give a scheme or plan of the plate (Fig. 2), adding the names of the effaced characters, which the

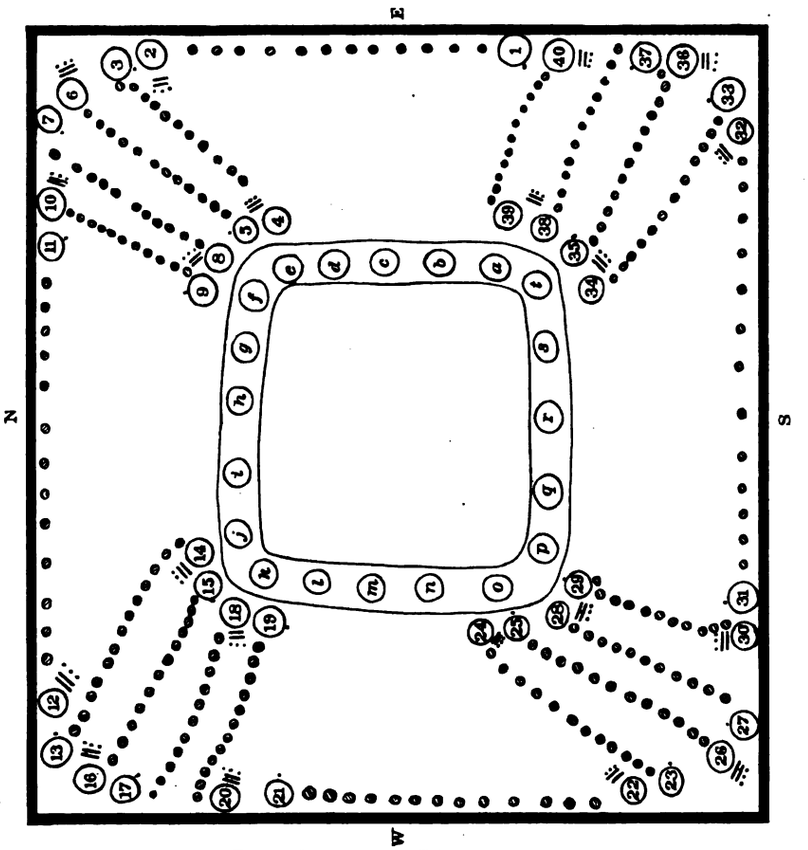



FIG. 2.—Scheme of the Tableau des Bacab.

table enables us to do by following it out in the manner explained. I also give in Plate II another figure of the plate of the Cortesian Codex, with the effaced characters inserted, and the interchange of *Caban* and *Eb* which will be hereafter explained. This plate corresponds with the plan or scheme shown in Fig. 2.[4]

In this we commence with Kan, numbered 1, in the top row, moving thence toward the left as already indicated, following the course shown by the numbers.

By this time the reader, if he has studied the plate with care, has probably encountered one difficulty in the way of the explanation given; that there are usually *twelve* large dots instead of *eleven*, as there should be, between the day signs; as, for example, between Kan No. 1 and Cib No. 2, in the upper row. This I am unable to explain, except on the supposition that the artist included but one of the day signs in the count, or that it was not the intention to be very exact in this respect. The fact that the number of dots in a row is not always the same, there being in some cases as many as thirteen, and in others but eleven, renders the latter supposition probable. In the scheme the number of dots in the lines is given as nearly as possible as on the plate.

As there are four different series of years in the Maya calendar, the Cauac years, Kan years, Muluc years, and Ix years, it is necessary that we have four different tables, similar to that given for the Cauac years, to represent them, or to combine all in one table.

As I have adopted in my former work[5] a scheme of combining them I will insert it here (Table III).

TABLE III.—*Condensed Maya Calendar.*

| Cauac column. | Kan column. | Muluc column. | Ix column. | 1 14 | 2 15 | 3 16 | 4 17 | 5 18 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cauac. | Kan. | Muluc. | Ix. | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 |
| Ahau. | Chicchan. | Oc. | Men. | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 |
| Ymix. | Cimi. | Chuen. | Cib. | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 |
| Ik. | Manik. | Eb. | Caban. | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 |
| Akbal. | Lamat. | Ben. | Ezanab. | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 |
| Kan. | Muluc. | Ix. | Cauac. | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 |
| Chicchan. | Oc. | Men. | Ahau. | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 |
| Cimi. | Chuen. | Cib. | Ymix. | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 |
| Manik. | Eb. | Caban. | Ik. | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 |
| Lamat. | Ben. | Ezanab. | Akbal. | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 |
| Muluc. | Ix. | Cauac. | Kan. | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 |
| Oc. | Men. | Ahau. | Chicchan. | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 |
| Chuen. | Cib. | Ymix. | Cimi. | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 |
| Eb. | Caban. | Ik. | Manik. | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 |
| Ben. | Ezanab. | Akbal. | Lamat. | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 |
| Ix. | Cauac. | Kan. | Muluc. | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 |
| Men. | Ahau. | Chicchan. | Oc. | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 |
| Cib. | Ymix. | Cimi. | Chuen. | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 |
| Caban. | Ik. | Manik. | Eb. | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 |
| Ezanab. | Akbal. | Lamat. | Ben. | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 |

[4] As the reduction of the cut prevents the insertion of the names of the days, letters have been substituted for them in the quadrilateral or inner ring as follows:

*In the top line.*—Ymix, *a;* Chicchan, *b;* Muluc, *c;* Ben, *d,* and Caban, *e.*

*In the left column.*—Cimi, *f;* Ik, *g;* Oc, *h;* Ix, *i,* and Ezanab, *j.*

*In the bottom line.*—Akbal, *k;* Manik, *l;* Chuen, *m;* Men, *n,* and Cauac, *o.*

*In the right column.*—Kan, *p;* Lamat, *q;* Eb, *r;* Ahau, *s,* and Cib, *t.*

[5] Study of the Manuscript Troano, p. 11.

But I must request the reader to refer to that work for an explanation of the method of using it.

By using the different columns in this table, viz, the Cauac column, the Kan column, the Muluc column, and the Ix column, in the same way as we have that of the previous Table No. I, we shall find that the plate is intended to apply in the same way to each of the four years.[6] A further correspondence will also be found in the fact that the thirteen figure columns of our table just complete the circuit of the plate, and that for the other months (or rather weeks) we commence again at the first, just as the table.

For the Kan years we commence on our scheme (Fig. 2) or the plate (No. II) at Kan No. 1, at the top, and moving around to the left, as shown, we end the thirteenth column of the calendar (13 Akbal) with Akbal No. 40. For the Muluc years we commence with Muluc No. 11, of the left side of the scheme, and end with Lamat No. 10. For the Ix years we begin with Ix No. 21, at the bottom, and end with Been No. 20. For the Cauac years we begin with Cauac No. 31, at the right side, and end with Ezanab No. 30.

By following this plan we will find that the characters and numerals in the plate agree in every case with the names and numbers of the days in the table, showing that I have properly interpreted this part of the plate. It is impossible that there should be such exact agreement if I were wrong in my interpretation.

This, it seems to me, will show beyond controversy the respective quarters to which the different years are assigned in the plate—Kan to the top, where this year begins; Muluc to the left; Ix to the bottom, and Cauac to the right hand; and, as a consequence, that the top is the east; left, north; bottom, west, and right hand, south. But this is a point to be discussed hereafter.

Our next step is to ascertain the object in view in placing the twenty-day characters around the inner space in the order we find them. Here I confess we shall encounter greater difficulty in arriving at a satisfactory explanation; still, I think we shall be able to show one object in view in this singular arrangement, although we fall short of a complete interpretation.

If we commence with Ymix, in the upper line of the quadrilateral, and move around it to the left, as heretofore, noting the days in each side in the order they come on the plate, we find them to be as follows:

In the top line: Ymix, Chicchan, Muluc, Been, Eb.

Left column: Cimi, Ik, Oc, Ix, Ezanab.

Bottom line: Akbal, Manik, Chuen, Men, Cauac.

Right column (upward): Kan, Lamat, Caban, Ahau, Cib.

Now let us take the twenty days, in the order they stand in the cal-

[6] It is worthy of note that the numerals on the plate apply only to the years 1 Cauac, 1 Kan, 1 Muluc, and 1 Ix, the first years of an Indication or week of years.

endar, commencing with Kan, writing them in four columns, placing one name in each in succession, thus:

| | | | |
|---|---|---|---|
| Kan. | Chicchan. | Cimi. | Manik. |
| Lamat. | Muluc. | Oc. | Chuen. |
| Eb. | Been. | Ix. | Men. |
| Cib. | Caban. | Ezanab. | Cauac. |
| Ahau. | Ymix. | Ik. | Akbal. |

If we commence with any other day the groups will contain respectively the same days, as, for example, if we begin with Ymix as here shown (Table IV).

As I am inclined to believe the author of the plate adopted this order I shall use and refer to this table in speaking of these groups.

TABLE IV.

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| Ymix. | Ik. | Akbal. | Kan. |
| Chicchan. | Cimi. | Manik. | Lamat. |
| Muluc. | Oc. | Chuen. | Eb. |
| Been. | Ix. | Men. | Cib. |
| Caban. | Ezanab. | Cauac. | Ahau. |

Examining the five names in the third column we find they are the same as those in the bottom line of the quadrilateral of the plate, and also in the same order. Those of the second column are the same as those in the left column of the plate, though not precisely in the same order; those in the first column the same as those in the top line of the plate, except that in our column we have Caban in place of Eb; and those in the fourth column the same as those in the right column of the plate, except that in our column we have Eb instead of Caban. I am satisfied, therefore, that the artist who made the plate has transposed the characters Eb and Caban; that in place of Eb, the left-hand character of the upper line, there should be Caban, and in place of Caban, the middle character of the right column, there should be Eb, and have made this change in my scheme (Fig. 2) and in Plate II.

This, I admit, has the appearance of making an arbitrary change to suit a theory; but besides the strong evidence in favor of this change shown by the arrangement of the days in four columns just given, I propose to present other testimony.

That the characters here interpreted *Eb* and *Caban* are the same as those given by Landa, and in the Manuscript Troano we have positive evidence in the tortous line in the outer space, of which we have already given an explanation. Hence there is no escape from the difficulty by supposing the artist had reversed the characters in their reference to the names. Either he has reversed them as to place, or we are mistaken in our supposition as to how the four groups were obtained.

If we turn, now, to the Manuscript Troano, and examine the day columns, comparing them with these four groups as I have corrected them by this single transposition, I think we shall find one clue at least to the object of the arrangement we observe on this plate. As but few are likely to have the Manuscript at hand, I will refer to Chapter VII of my work (*A Study of the Manuscript Troano*), where a large number of these day columns are given. In making the comparison I ask the reader to use my scheme (Fig. 2). Commencing with the first column on page 165, we find it to be Manik, Cauac, Chuen, Akbal, Men, precisely the same days as in the bottom line. The next two on the same page are first Akbal, Muluc, Men, Ymix, Manik, and second, Ben, Cauac, Chicchan, Chuen, Caban, taken alternately from the bottom and top lines of the quadrilateral.

On the lower part of the same page (165) is another column with the following days, Ahau, Oc, Eb, Ik, Kan, Ix, Cib, Cimi, Lamat, taken alternately from the right and left sides of the plate as given in our scheme. But there are only nine names in the column, when the order in which they are taken would seem to require ten. By examining the plate (IV) in the Manuscript the reader will see that there are indications that one at the top has been obliterated. By examining the right and left columns of our scheme we see that the omitted one is Ezanab. By counting the intervals between the days, as explained in my work, we find them to be alternately two and ten, and that by this rule the missing day is Ezanab. The reader will notice in these examples that Eb and Caban belong to the positions I have given them in my scheme (Fig. 2).

Turning to page 166 we find the first column (from "second division," Plate IV) to be Kan, Cib, Lamat, Ahau, Eb, the same days as in the right column of our scheme. The second column, Cauac, Chuen, Akbal, Men, Manik, the same as the lower line of the scheme. The first column on page 167 has the same days as the right column of the plate, as corrected in my scheme and our Plate II. The second column of this page presents a new combination. We have so far found the names of a day column all in a single group or line of our plate, or taken alternately from opposite sides; here we find them taken alternately from each of the four sides of the quadrilateral moving around to the left in the order I have heretofore explained. The days in this column are Caban, Ik, Manik, Eb, Caban. One is taken from the upper line (as corrected), then one from the left side, next from the bottom line, then from the right side (as corrected), and then the same from the top line.

It is unnecessary for me to give more examples, as the reader can make the comparison for himself; and he will, as I believe, find my theory sustained.

The only real objection I can see to my explanation of the arrangement of the days in this circle is the fact that it necessitates the transposition of two characters, but it is not unreasonable to suppose that the artist may have made this one mistake.

Fortunately we find on Plates 18 and 19 of the Codex Peresianus[1] what appears to be a complete confirmation of the theory here advanced.

This is a kind of tabular arrangement of certain days, with accompanying numbers, as shown in our Fig. 3, which is an exact copy of those portions of Plates 18 and 19 of the Codex Peresianus, to which I refer.

I also give in Table V the names of the days and the numbers corresponding with the symbols and characters of Fig. 3. In this table the erased days and obliterated numerals are restored, these being in italics to distinguish them from those on the plate.

TABLE V.

| | | | | |
|---|---|---|---|---|
| *10. Kan.* | 8. Cib. | 6. Lamat. | 4. Ahau. | 2. Eb. |
| *10. Lamat.* | 8. Ahau. | 6. Eb. | 4. Kan. | 2. Cib. |
| *10. Eb.* | 8. Kan. | 6. Cib. | 4. Lamat. | 2. Ahau. |
| *10. Cib.* | 8. Lamat. | 6. Ahau. | 4. Eb. | 2. Kan. |
| *10. Ahau.* | 8. Eb. | 6. Kan. | 4. Cib. | 2. Lamat. |
| 13. *Kan.* | *11. Cib.* | 9. Lamat. | 7. Ahau. | 5. Eb. |
| 13. *Lamat.* | *11. Ahau.* | 9. Eb. | 7. Kan. | 5. Cib. |
| 13. *Eb.* | *11. Kan.* | 9. Cib. | 7. Lamat. | 5. Ahau. |
| 13. *Cib.* | *11. Lamat.* | 9. Ahau. | 7. Eb. | 5. Kan. |
| 13. *Ahau.* | *11. Eb.* | 9. Kan. | 7. Cib. | 5. Lamat. |
| 3. Kan. | 1. *Cib.* | *12. Lamat.* | | |
| 3. Lamat. | 1. *Ahau.* | *12. Eb.* | | |
| 3. Eb. | 1. *Kan.* | *12. Cib.* | | |
| 3. Cib. | 1. *Lamat.* | *12. Ahau.* | | |
| 3. Ahau. | 1. *Eb.* | *12. Kan.* | | |

An inspection of this table shows us that the five days repeated in each column are the same as those on the right of the quadrilateral of our scheme (Fig. 2), and are exactly in the order obtained by arranging the days of the month in four columns in the manner heretofore shown. (See column 4, Table IV.)

If I am correct in my supposition, we then have one clue to, if not a full explanation of, the method of obtaining the day columns in the Manuscript Troano.

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[1] *Manuscrit dit Mexicain No. 2.*—The Bureau of Ethnology has had the good fortune to obtain a copy of Duruy's photographic reproduction of this Manuscript, of which, according to Leclerc (Bibliotheca Americana), only ten copies were issued, though Brasseur in his Bibliotheque Mexico-Guatémalienne (p. 95) affirms that the edition consisted of fifty copies. The full title is as follows: "*Manuscrit dit Mexicain No. 2 de la Bibliothèque Imperiale Photographie (sans reduction). Par ordre de S. E. M. Duruy, Ministre de l'Instruction publique, President de la Commission scientifique du Mexique.* Paris, 1864."

Rosny has given a *fac-simile* copy from the two plates here referred to in Plate XVI. of his *Essai sur le Dechiffrement de l'Ecriture Hieratique.*

Not this only, for this table of the Codex Peresianus furnishes us also the explanation of the red numerals found over the day columns in the Manuscript Troano. Take, for example, Plate XIX, first or upper division, given also in my Study of The Manuscript Troano, p. 176, here the number is IV, corresponding with column 4 of the above table (V), where the days are the same and the numeral prefixed to each day is 4. Plate XXVI (Study Manuscript Troano, p. 177), lower division, the days are the same and the number over the column is XIII, corresponding with the sixth column of Table V. This corroborates the opinion I expressed in my former work, that the number over the column was to be applied to each day of the column.

Why is the order of the numerals in the extract from the Codex Peresianus precisely the same as the numbering of the Ahaues? I answer, because each column, if taken as referring to the four classes of years, will, when the number of the month is given, determine just the years of an Ahau; or a fancy of the artist to follow an order considered sacred.

To illustrate, let us take the next to the right-hand column of the table where the numeral is 1, and let us assume the month to be Pop, or the 1st. Then we have 1 Cib, 1 Ahau, 1 Kan, 1 Lamat, and 1 Eb of the first month, and from this data we are to find the years. As there can be four years found to each of these days, that is a Cauac year with 1 Cib in the first month, a Muluc year with one Cib in the first month, a Kan year with one Cib in the first month, an Ix year with one Cib in the first month, a Kan year with one Ahau in the first month, &c., it is evident that there will be, as the total result, just twenty years.

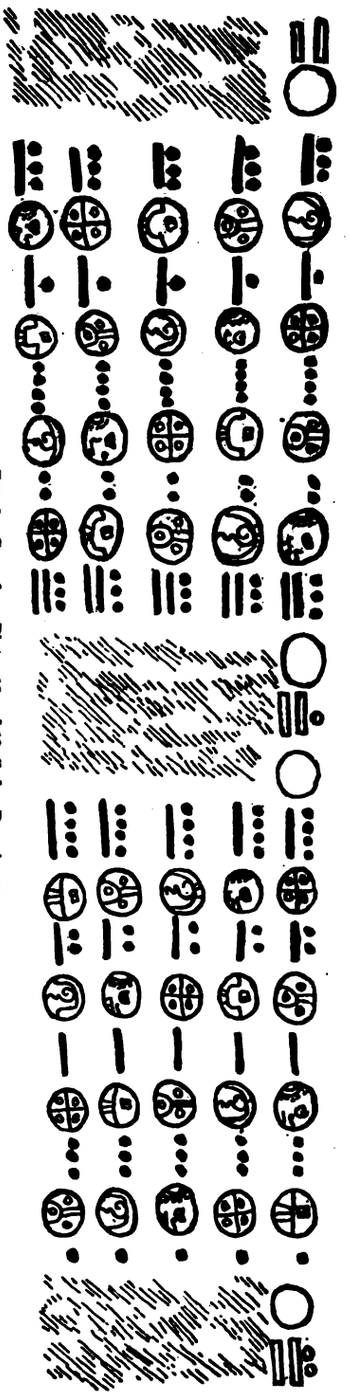


Fig. 2.—Copy from Plates 18 and 19, Codex Peresianus.

As I cannot repeat here, without occupying too much space, the method of finding the years, I must refer the reader to Study Manuscript Troano, p. 23, *et al.* Hunting them out, by using our Table III, we find them to be as follows:

| | 1 *Cib.* | 1 *Ahau.* | 1. *Kan.* | 1. *Lamat.* | 1 *Eb.* |
|---|---|---|---|---|---|
| Years .... | 10 Cauac. | 13 Cauac. | 9 Cauac. | 5 Cauac. | 1 Cauac. |
| Years .... | 2 Kan. | 11 Kan. | 1 Kan. | 10 Kan. | 6 Kan. |
| Years .... | 7 Muluc. | 3 Muluc. | 12 Muluc. | 8 Muluc. | 11 Muluc. |
| Years .... | 12 Ix. | 8 Ix. | 4 Ix. | 13 Ix. | 9 Ix. |

If we turn now to Table XVII (Study Manuscript Troano p. 44), we will find that these are precisely the counted years (those in the space inclosed by the dotted lines) in Ahau number VI.

If we assume the month to be the 11th then the numbers of the Ahaues will correspond exactly with the numbers of the columns of our Table V.[3]

As it may be supposed that using the same numeral to any five days of the twenty in this way will produce a similar result, let us test it by an example. For this purpose we select the same column of our foregoing table, No. V—that with the number 1 prefixed—Cib, Ahau, Kan, Lamat, Eb, but in place of Lamat we insert Cimi. Hunting out the years as heretofore we find them to be as follows:

| | 1 *Cib.* | 1 *Ahau.* | 1 *Kan.* | 1 *Cimi.* | 1 *Eb.* |
|---|---|---|---|---|---|
| Years .... | 10 Cauac. | 13 Cauac. | 9 Cauac. | 7 Cauac. | 1 Cauac. |
| Years .... | 2 Kan | 11 Kan. | 1 Kan. | 12 Kan. | 6 Kan. |
| Years .... | 7 Muluc. | 3 Muluc. | 12 Muluc. | 10 Muluc. | 11 Muluc. |
| Years .... | 12 Ix. | 8 Ix. | 4 Ix. | 2 Ix. | 9 Ix. |

If we try to locate these years in an Ahau in Table XVII (Study Manuscript Troano p. 44), we shall find it impossible to do so, nor can we locate them in any table that can be made which has either twenty-four or twenty years in an Ahau, while on the other hand the twenty years obtained by using a column of the table from the Codex Peresianus can be located in some one of the Ahaues obtained by any division of the Grand Cycle into consecutive groups of twenty-four years that can be made. It would require too much space to prove this assertion, but any one who doubts its correctness can test it.

As the extract we have given from the Codex Peresianus relates only to one of the four groups of days—that on the right of the quadrilateral—I will supply in the following tables, Nos. VII, VIII, and IX, the arrangement of the groups of the other three sides; adding the other (Table VI), also, so as to bring the four together in the order of the sides of the quadrilateral, commencing with the line on the right, next the upper one, and so on.

While this is undoubtedly the order in which they are to be taken; which is the proper one to commence with? is a question yet to be discussed.

---

[3] An illustration can be seen on pp. 36–40, Study Manuscript Troano.

## TABLE VI.

| | | | | |
|---|---|---|---|---|
| 10. Kan. | 8. Cib. | 6. Lamat. | 4. Ahau. | 2. Eb. |
| 10. Lamat. | 8. Ahau. | 6. Eb. | 4. Kan. | 2. Cib. |
| 10. Eb. | 8. Kan. | 6. Cib. | 4. Lamat. | 2. Ahau. |
| 10. Cib, | 8. Lamat. | 6. Ahau. | 4. Eb. | 2. Kan. |
| 10. Ahau. | 8. Eb. | 6. Kan. | 4. Cib. | 2. Lamat. |
| 13. Kan. | 11. Cib. | 9. Lamat. | 7. Ahau. | 5. Eb. |
| 13. Lamat. | 11. Ahau. | 9. Eb. | 7. Kan. | 5. Cib. |
| 13. Eb. | 11. Kan. | 9. Cib. | 7. Lamat. | 5. Ahau. |
| 13. Cib. | 11. Lamat. | 9. Ahau. | 7. Eb. | 5. Kan. |
| 13. Ahau. | 11. Eb. | 9. Kan. | 7. Cib. | 5. Lamat. |
| 3. Kan. | 1. Cib. | 12. Lamat. | | |
| 3. Lamat. | 1. Ahau. | 12. Eb. | | |
| 3. Eb. | 1. Kan. | 12. Cib. | | |
| 3. Cib. | 1. Lamat. | 12. Ahau. | | |
| 3. Ahau. | 1. Eb. | 12. Kan. | | |

## TABLE VII.

| | | | | |
|---|---|---|---|---|
| 10. Ymix. | 8. Been. | 6. Chicchan. | 4. Caban. | 2. Muluc. |
| 10. Chicchan. | 8. Caban. | 6. Muluc. | 4. Ymix. | 2. Been. |
| 10. Muluc. | 8. Ymix. | 6. Been. | 4. Chicchan. | 2. Caban. |
| 10. Been. | 8. Chicchan. | 6. Caban. | 4. Muluc. | 2. Ymix. |
| 10. Caban. | 8. Muluc. | 6. Ymix. | 4. Been. | 2. Chicchan. |
| 13. Ymix. | 11. Been. | 9. Chicchan. | 7. Caban. | 5. Muluc. |
| 13. Chicchan. | 11. Caban. | 9. Muluc. | 7. Ymix. | 5. Been. |
| 13. Muluc. | 11. Ymix. | 9. Been. | 7. Chicchan. | 5. Caban. |
| 13. Been. | 11. Chicchan. | 9. Caban. | 7. Muluc. | 5. Ymix. |
| 13. Caban. | 11. Muluc. | 9. Ymix. | 7. Been. | 5. Chicchan. |
| 3. Ymix. | 1. Been. | 12. Chicchan. | | |
| 3. Chicchan. | 1. Caban. | 12. Muluc. | | |
| 3. Muluc. | 1. Ymix. | 12. Been. | | |
| 3. Been. | 1. Chicchan. | 12. Caban. | | |
| 3. Caban. | 1. Muluc. | 12. Ymix. | | |

## TABLE VIII.

| | | | | |
|---|---|---|---|---|
| 10. Oc. | 8. Ik. | 6. Ix. | 4. Cimi. | 2. Ezanab. |
| 10. Ix. | 8. Cimi. | 6. Ezanab. | 4. Oc. | 2. Ik. |
| 10. Ezanab. | 8. Oc. | 6. Ik. | 4. Ix. | 2. Cimi. |
| 10. Ik. | 8. Ix. | 6. Cimi. | 4. Ezanab. | 2. Oc. |
| 10. Cimi. | 8. Ezanab. | 6. Oc. | 4. Ik. | 2. Ix. |

| | | | | |
|---|---|---|---|---|
| 13. Oc. | 11. Ik. | 9. Ix. | 7. Cimi. | 5. Ezanab. |
| 13. Ix. | 11. Cimi, | 9. Ezanab. | 7. Oc. | 5. Ik. |
| 13. Ezanab. | 11. Oc. | 9. Ik. | 7. Ix. | 5. Cimi. |
| 13. Ik. | 11. Ix. | 9. Cimi. | 7. Ezanab. | 5. Oc. |
| 13. Cimi. | 11. Ezanab. | 9. Oc. | 7. Ik. | 5. Ix. |

| | | |
|---|---|---|
| 3. Oc. | 1. Ik. | 12. Ix. |
| 3. Ix. | 1. Cimi. | 12. Ezanab. |
| 3. Ezanab. | 1. Oc. | 12. Ik. |
| 3. Ik. | 1. Ix. | 12. Cimi. |
| 3. Cimi. | 1. Ezanab. | 12. Oc. |

TABLE IX.

| | | | | |
|---|---|---|---|---|
| 10. Men. | 8. Manik. | 6. Cauac. | 4. Chuen. | 2. Akbal. |
| 10. Cauac. | 8. Chuen. | 6. Akbal. | 4. Men. | 2. Manik. |
| 10. Akbal. | 8. Men. | 6. Manik. | 4. Cauac. | 2. Chuen. |
| 10. Manik. | 8. Cauac. | 6. Chuen. | 4. Akbal. | 2. Men. |
| 10. Chuen. | 8. Akbal. | 6. Men. | 4. Manik. | 2. Cauac. |

| | | | | |
|---|---|---|---|---|
| 13. Men. | 11. Manik. | 9. Cauac. | 7. Chuen. | 5. Akbal. |
| 13. Cauac. | 11. Chuen. | 9. Akbal. | 7. Men. | 5. Manik. |
| 13. Akbal. | 11. Men. | 9. Manik. | 7. Cauac. | 5. Chuen. |
| 13. Manik. | 11. Cauac. | 9. Chuen. | 7. Akbal. | 5. Men. |
| 13. Chuen. | 11. Akbal. | 9. Men. | 7. Manik. | 5. Cauac. |

| | | |
|---|---|---|
| 3. Men. | 1. Manik. | 12. Cauac. |
| 3. Cauac. | 1. Chuen. | 12. Akbal. |
| 3. Akbal. | 1. Men. | 12. Manik. |
| 3. Manik. | 1. Cauac. | 12. Chuen. |
| 3. Chuen. | 1. Akbal. | 12. Men. |

There is still another and somewhat probable supposition in regard to the object of this division of the days of the month into groups of five, which will obviate one objection to the explanation given in my former work, viz, the very large number of dates given in the Manuscript Troano on the supposition that there are four years to each numeral connected with the day columns. It is possible that the days of one group indicate the year intended; that is, whether it is a Cauac, Kan, Muluc, or Ix year.

For example, column No. 4 (Table IV), or some other one of the four, may relate to Kan years; No. 1 to Muluc years; No. 2 to Ix years, and No. 3 to Cauac years. Assuming this to be correct, then the example heretofore given, where the days named are 1 Cib, 1 Ahau, 1 Kan, 1 Lamat, and 1 Eb, and the month the first (Pop), would indicate only the years 7 Muluc, 3 Muluc, 12 Muluc, 8 Muluc, and 11 Muluc. These would all come in Ahau No. VI, as before, but would indicate that the festival, or whatever they referred to, occurred but once every four years,

in the first month of the year. Hence if the five days of a column (as of the Manuscript Troano) are all taken from one side of the quadrilateral of our scheme they will refer to years of one dominical sign only; if alternately from opposite sides, then to the years of two dominical signs, but if taken alternately from the four sides they would refer to the four classes of years. This will reduce the number of dates in the Manuscript Troano very considerably from the other supposition, but will not in any way change the position of the Ahaues in the Grand Cycle.

As one further item of evidence in regard to this method of arranging the twenty days of the month in four groups or columns, I call attention to what is found on Plate 32 of the Dresden Codex. Here we find the four columns of five days each, corresponding precisely with the arrangement of the Maya days into four groups, as heretofore. I present here the arrangement as found on this plate:

TABLE X.

| *a.* | *b.* | *c.* | *d.* |
|---|---|---|---|
| Manik. | Cib. | Chicchan. | Ix. |
| Chuen. | Ahau. | Muluc. | Ezanab. |
| Men. | Kan. | Been. | Ik. |
| Cauac. | Lamat. | Caban. | Cimi. |
| Akbal. | Eb. | Ymix. | Oc. |

It will be seen by comparing this grouping with that in Table IV that column *a* of this plate contains the same days as column 3 of the table; column *b* the same as column 4; column *c* the same as column 1, and column *d* the same as column 2.

But so far I have found no entirely satisfactory explanation of the order given in many of these columns and in three of the sides of the quadrilateral of the Cortesian plate.

As this discussion is preliminary to a discussion of the assignment of the symbols of the cardinal points, it becomes necessary, in order to bring in all the evidence bearing upon the question, to examine certain points of the Mexican calendar system, as given by various authors and as exhibited in the Mexican Codices.

If we refer now to Plate 43 of the Borgian Codex, as found in Kingsborough's "Mexican Antiquities," Vol. III, a photo-engraved copy of which is presented in our Fig. 4, we shall, as I believe, not only find additional confirmation of the views I have advanced in reference to the peculiar arrangement of the days around the quadrilateral in the plate of the Cortesian Codex, but also strong evidence of a common origin of the Mexican and Central American calendars.

This plate of the Borgian Codex, which is Mexican and not Maya, consists of four groups, the whole arranged in the form of a square; each group, also a square, is surrounded by a serpent, the heads of the four serpents being brought near together at the center, which is indicated

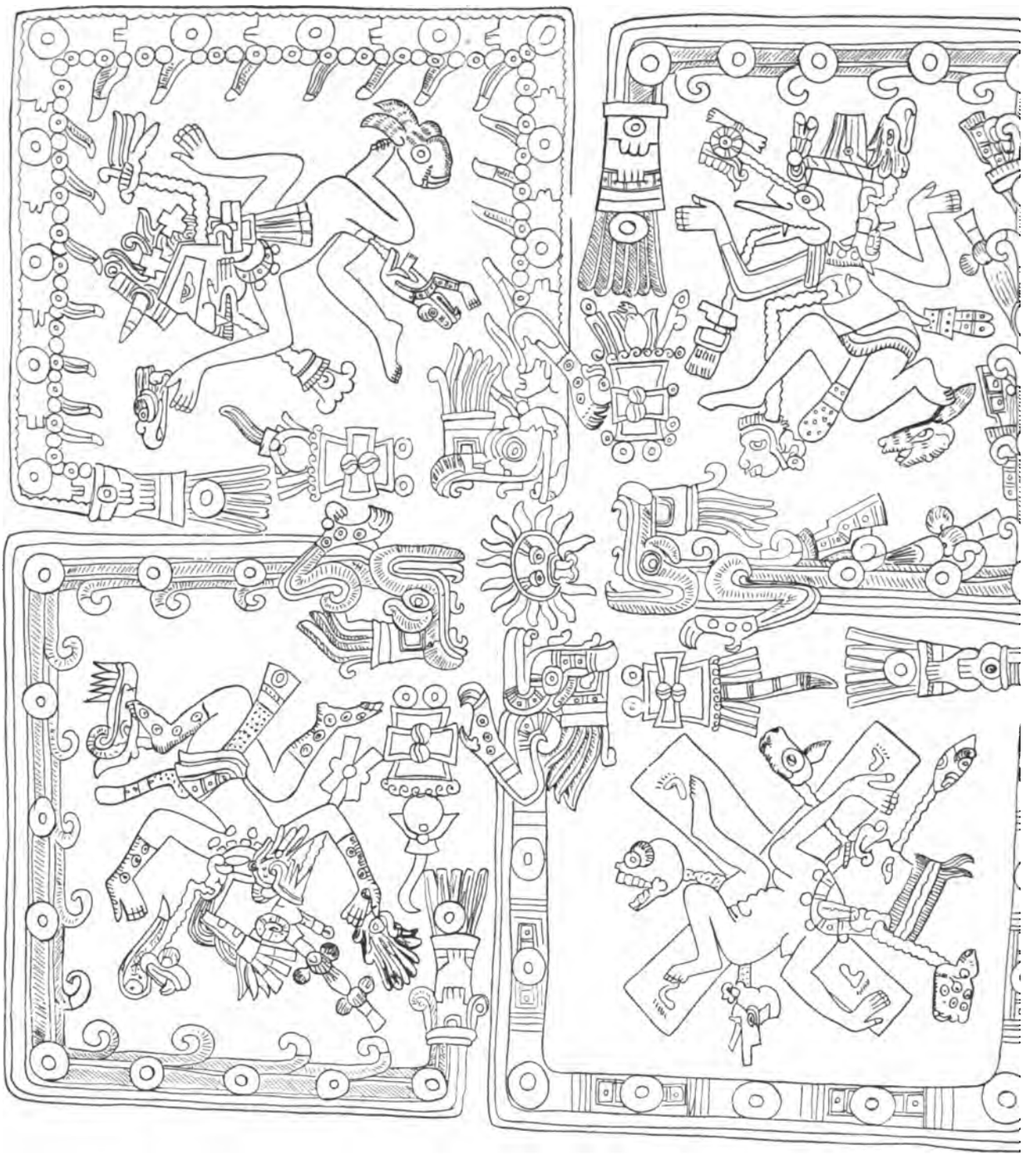


FIG. 4.—Copy of plate 43. Borgian Codex.

by the figure of the sun. Each of these serpents, as I have heretofore intimated,[9] probably denotes one of the four-year series of the cycle of fifty-two years, just as in the Maya cycle we would say "the Cauac series," "Kan series," etc.[10] The thirteen years of each series is denoted by the small circles on the serpents. The four large figures are, as we shall hereafter see, fanciful representations of certain ideas held by this people in regard to the four cardinal points, each probably with its significant color as understood by the artist, and each probably indicating one of the four-year bearers.

But at present our attention is directed to something else to be found on this plate. In each of the four spaces and around each of the large figures we observe five Mexican day symbols connected usually with the main figure by heavy-waved colored lines. What is the signification of these day symbols in this connection? Precisely the same, I believe, as those in the four sides of the quadrilateral in the Codex Cortesianus. But first I would remark that the waved, colored, connecting lines have no other signification than to denote the parts of the body to which the days are here severally assigned; hence, as they have no bearing on the questions now under discussion, I shall have no occasion to take any further notice of them.

If we arrange the Mexican days in four columns as we did the Maya, that is, placing the first name in the first column, the second in the second column, and so on, following the usual orthography and the order given, the groups will be as follows:

TABLE XI.

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| Cipactli. | Ehecatl. | Calli. | Cuetzpalin. |
| Coatl. | Miquiztli. | Mazatl. | Tochtli. |
| Atl. | Itzquintli. | Ozomatli. | Malinalli. |
| Acatl. | Ocelotl. | Quauhtli. | Cozcaquauhtli. |
| Ollin. | Tecpatl. | Quiahuitl. | Xochitl. |

Or, to give them their English equivalents as we usually find them, as follows:

TABLE XII.

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| Dragon. | Wind. | House. | Lizard. |
| Snake. | Death. | Deer. | Rabbit. |
| Water. | Dog. | Monkey. | Grass. |
| Cane. | Tiger. | Eagle. | Vulture. |
| Movement. | Flint. | Rain. | Flower. |

[9] Study Manuscript Troano, p. 86.

[10] Possibly each serpent represents one indication of thirteen years, but the proper answer to this question is not important in the present investigation.

Comparing these columns with the symbols around each one of these large figures we find that to each one of the latter are assigned the days of one of these four columns. In the lower left-hand square, to the large green figure, those in column 1; thus, at the left foot, the Dragon; to the back of the head, the Snake; to the eye, Cane; in the right hand, Water; and below the elbow, but connected with the mouth, Ollin or movement (sometimes translated earthquake). To the yellow figure, in the lower right-hand square, are applied those of the second column; to the black figure, in the upper right-hand square, those of the third column; and to the red figure, in the upper left-hand square, those of the fourth column. There is therefore scarcely any doubt that this arrangement is for precisely the same purpose as that in the plate of the Codex Cortesianus.

As proof that the Mexicans used these combinations in much the same way as the Maya priests I call attention to the following examples:

On Plate 59, of the same (Borgian) Codex, we find two columns of days, one on the right and the other on the left, as follows:

| *Left column.* | *Right column.* |
|---|---|
| Tochtli. | Quauhtli. |
| Ehecatl. | Atl. |
| Cozcaquauhtli. | Calli. |
| Itzquintli. | Ollin. |
| Cuetzpalin. | Ozomatli. |
| Tecpatl. | Coatl. |
| Malinalli. | Quiahuitl. |
| Miquiztli. | Acatl. |
| Xochitl. | Mazatl. |
| Ocelotl. | Cipactli. |

Comparing these with the names in the four columns (Table XI), we find that those on the left were taken alternately from columns 4 and 2, and those on the right alternately from columns 3 and 1. On Plates 61 and 62 we find substantially the same arrangement, or at least the same idea as the extract from Codex Peresianus, heretofore referred to. On these two plates (embracing all of 61, and the lower left-hand square of 62) we find five squares, each one bordered on two sides with the symbol of a single day repeated thirteen times and accompanied by numeral signs.

Commencing with the square on page 62, where the repeated day symbol is Cipactli, and reading the line from left to right and up the column, we find the numbers to be as follows, filling out the effaced ones in the line:

*Cipactli*, 1, 8, 2, 9, 3, 10, 4, 11, 5, 12, 6, 13, 7 (the symbol being repeated with each number.)

In the next, the lower right-hand square on Plate 61, where the day is Coatl, the numbers, reading the same way, are as follows (filling out one effaced one):

*Coatl*, 5, 12, 6, 13, 7, 1, 8, 2, 9, 3, 10, 4, 11.

Taking the lower left-hand square next, the day Atl, and reading in the same direction, we find the numbers to be as follows (filling out two effaced groups):

*Atl*, 9, 3, 10, 4, 11, 5, 12, 6, 13, 7, 1, 8, 2.

We take the upper left hand next, reading from left to right and up:

*Acatl*, 13, 7, 1, 8, 2, 9, 3, 10, 4, 11, 5, 12, 6.

Lastly, the upper right-hand square, reading the same way as the last.

*Ollin*, 4, 11, 5, 12, 6, 13, 7, 1, 8, 2, 9, 3, 10.

We have only to turn to our abridged calendar (Table III) to find this explained. If we take the Ix column and select every fourth day, to wit, Ix, Ezanab, Ik, Cimi, and Oc, and read the line of numbers opposite each, we shall find them corresponding precisely with those mentioned here. For instance, those opposite *Ix* the same as those opposite *Cipactli*, &c.

We further notice that these five names, *Cipactli*, *Coatl*, *Atl*, *Acatl*, and *Ollin*, or, to use the English names, Dragon, Snake, Water, Cane, and Movement, are precisely those of column 1 of the arrangement of the Mexican days as heretofore given (Table XI).

On plates 13–17 of the Vatican Codex, B, Kingsborough, Vol. III, we find precisely the same arrangement as that just described, and where the numerals are so distinct that there can be no doubt in regard to any of them. The days are exactly the same—Cipactli, Coatl, Atl, Acatl, and Ollin—and in the same order, but the plates are to be taken in the reverse order, commencing with 17, and the columns and lines are to be read

FIG. 5.—Copy of Plates 61 and 62, Vatican Codex B.

thus: Commencing at the bottom at the right hand, upward to the top, and then along the line toward the left.

On Plate 58 of the Borgian Codex we find six lines of days with five in each line. Five out of these six lines are composed of the five days just named, simply varied as to the respective positions they occupy in the line, but maintaining the same order.

On Plate 17, same Codex, we see two lines corresponding with the first and second columns of the arrangement of the days heretofore given.

But without further reference to these smaller or isolated groups, we have conclusive proof of this method of arranging the days among the Mexicans, in three extended series—one found on Plates 49–56 of the Vatican Codex B; one on Plates 31–38 of the Borgian Codex, and another on Plates 1–8 of the Bologna Codex.

I give here the arrangement found in the first, which is precisely the same as that of the Borgian Codex, except that this is to be read from the left to the right, and that of the Borgian Codex from the right to the left, both commencing with the bottom line (numbered 5 in the following list):

A photo-engraved copy of one plate of the former is also given in Fig. 5, as it furnishes proof that the days and the order in which they follow each other are the same as I have given them.

For the benefit of English readers the list is given in the English equivalents of the Mexican names.[11]

TABLE XIII.

| | | | | |
|---|---|---|---|---|
| 1. Water. | Dog. | Monkey. | Grass. | Cane. |
| 2. Movement. | Flint. | Rain. | Flower. | Dragon. |
| 3. Snake. | Death. | Deer. | Rabbit. | Water. |
| 4. Cane. | Tiger.[12] | Eagle. | Vulture. | Movement. |
| 5. Dragon. | Wind. | House. | Lizard. | Snake. |
| 1. Tiger. | Eagle. | Vulture. | Movement. | Flint. |
| 2. Wind. | House. | Lizard. | Snake. | Death. |
| 3. Dog. | Monkey. | Grass. | Cane. | Tiger. |
| 4. Flint. | Rain. | Flower. | Dragon. | Wind. |
| 5 Death. | Deer. | Rabbit. | Water. | Dog. |
| 1. Rain. | Flower. | Dragon. | Wind. | House. |
| 2. Deer. | Rabbit. | Water. | Dog. | Monkey. |
| 3. Eagle. | Vulture. | Movement. | Flint. | Rain. |
| 4. House. | Lizard. | Snake. | Death. | Deer. |
| 5. Monkey. | Grass. | Cane. | Tiger. | Eagle. |

[11] In order to accommodate the list to the paging it is divided into sections, the second section to follow to the right of the first; the third to the right of the second, and so on to the last, as though extended continuously to the right. Those numbered 1 would then form one continuous transverse line, as would also those numbered 2, 3, 4 and 5 respectively.

[12] In the original, *Deer*, certainly an error.

| | | | | |
|---|---|---|---|---|
| 1. Lizard. | Snake. | Death. | Deer. | Rabbit. |
| 2. Grass. | Cane. | Tiger. | Eagle. | Vulture. |
| 3. Flower. | Dragon. | Wind. | House. | Lizard. |
| 4. Rabbit. | Water. | Dog. | Monkey. | Grass. |
| 5. Vulture. | Movement. | Flint. | Rain. | Flower. |

| | | | | |
|---|---|---|---|---|
| 1. Water. | Dog. | Monkey. | Grass. | Cane. |
| 2. Movement. | Flint. | Rain. | Flower. | Dragon. |
| 3. Snake. | Death. | Deer. | Rabbit. | Water. |
| 4. Cane. | Tiger. | Eagle. | Vulture. | Movement. |
| 5. Dragon. | Wind. | House. | Lizard. | Snake. |

| | | | | |
|---|---|---|---|---|
| 1. Tiger. | Eagle. | Vulture. | Movement. | Flint. |
| 2. Wind. | House. | Lizard. | Snake. | Death. |
| 3. Dog. | Monkey. | Grass. | Cane. | Tiger. |
| 4. Flint. | Rain. | Flower. | Dragon. | Wind. |
| 5. Death. | Deer. | Rabbit. | Water. | Dog. |

| | | | | |
|---|---|---|---|---|
| 1. Rain. | Flower. | Dragon. | Wind. | House. |
| 2. Deer. | Rabbit. | Water. | Dog. | Monkey. |
| 3. Eagle. | Vulture. | Movement. | Flint. | Rain. |
| 4. House. | Lizard. | Snake. | Death. | Deer. |
| 5. Monkey. | Grass. | Cane. | Tiger. | Eagle. |

| | | | | |
|---|---|---|---|---|
| 1. Lizard. | Snake. | Death. | Deer. | Rabbit. |
| 2. Grass. | Cane. | Tiger. | Eagle. | Vulture. |
| 3. Flower. | Dragon. | Wind. | House. | Lizard. |
| 4. Rabbit. | Water. | Dog. | Monkey. | Grass. |
| 5. Vulture. | Movement. | Flint. | Rain. | Flower. |

| | | | | |
|---|---|---|---|---|
| 1. Water. | Dog. | Monkey. | Grass. | Cane. |
| 2. Movement. | Flint. | Rain. | Flower. | Dragon. |
| 3. Snake. | Death. | Deer. | Rabbit. | Water. |
| 4. Cane. | Tiger. | Eagle. | Vulture. | Movement. |
| 5. Dragon. | Wind. | House. | Lizard. | Snake. |

| | | | | |
|---|---|---|---|---|
| 1. Tiger.[13] | Eagle. | Vulture. | Movement. | Flint. |
| 2. Wind. | House. | Lizard. | Snake. | Death. |
| 3. Dog. | Monkey. | Grass. | Cane. | Tiger. |
| 4. Flint. | Rain. | Flower. | Dragon. | Wind. |
| 5. Death. | Deer. | Rabbit. | Water. | Dog. |

| | |
|---|---|
| 1. Rain. | Flower. |
| 2. Deer. | Rabbit. |
| 3. Eagle. | Vulture. |
| 4. House. | Lizard. |
| 5. Monkey. | Grass. |

[13] In the original, *Deer*.

If we examine the columns of this list, we see that each one contains the days of some one of the four columns of the arrangement heretofore given; not always in precisely the same order, but the same days.

Without stopping to attempt a further explanation of this calendar or *Tonalamatl*, which is not within the scope of our present purpose, I merely remark that it is evidently a representation of the Mexican "cycle of two hundred and sixty days," or thirteen months, the common multiple of 4, 5, 13, and 20, and hence a cycle, at the completion of which the day, numeral, &c. (except the month), will be the same as at the beginning.

## PLATE 44 OF THE FEJERVARY CODEX.

As a connecting link between the particular topic now under discussion and the consideration of the symbols of the cardinal points, I wish to refer to one plate of the Fejervary Codex, to wit, Plate 44, a *facsimile* of which is presented in Plate III:

A little careful inspection of this plate will suffice to convince the reader that it was gotten up upon the same plan and for the same purpose as the "Tableau des Bacab," or plate copied from the Codex Cortesianus, which is reproduced in our Plate I.

The sacred tree or cross, which is represented but once in that plate, and that in the central area, is here shown four times—once in each of the four outer spaces opposite the four sides of the inner area.

It is true we do not find here the intermediate ring (or quadrilateral) of days, but these are not wanting, for the four groups, corresponding with those on the four sides of the quadrilateral, are here found at the four corners wedged in between the colored loops, one group of five at each corner. The chief marked resemblance is to be found in the outer looped line, in which the day characters are connected by rows of dots. But here the lines and loops, although almost precisely in the form and relation to each other as in the plate of the Cortesian Codex, are variously and brightly colored, and the rows of dots are inclosed by lateral lines.

Now for the proof that it is designed for the same purpose as the looped line on the other plate. But it is necessary that I present first, in a tabular form, a Mexican calendar (Table XIV) similar to the condensed Maya calendar heretofore given.

I also give, immediately following, a list of Mexican days for thirteen months, the number necessary to make the circuit of the plate, just as the list of Maya days heretofore given. In this case I have used the English equivalents of the Mexican words for the benefit of English readers.

TABLE XIV.—Condensed Mexican calendar.

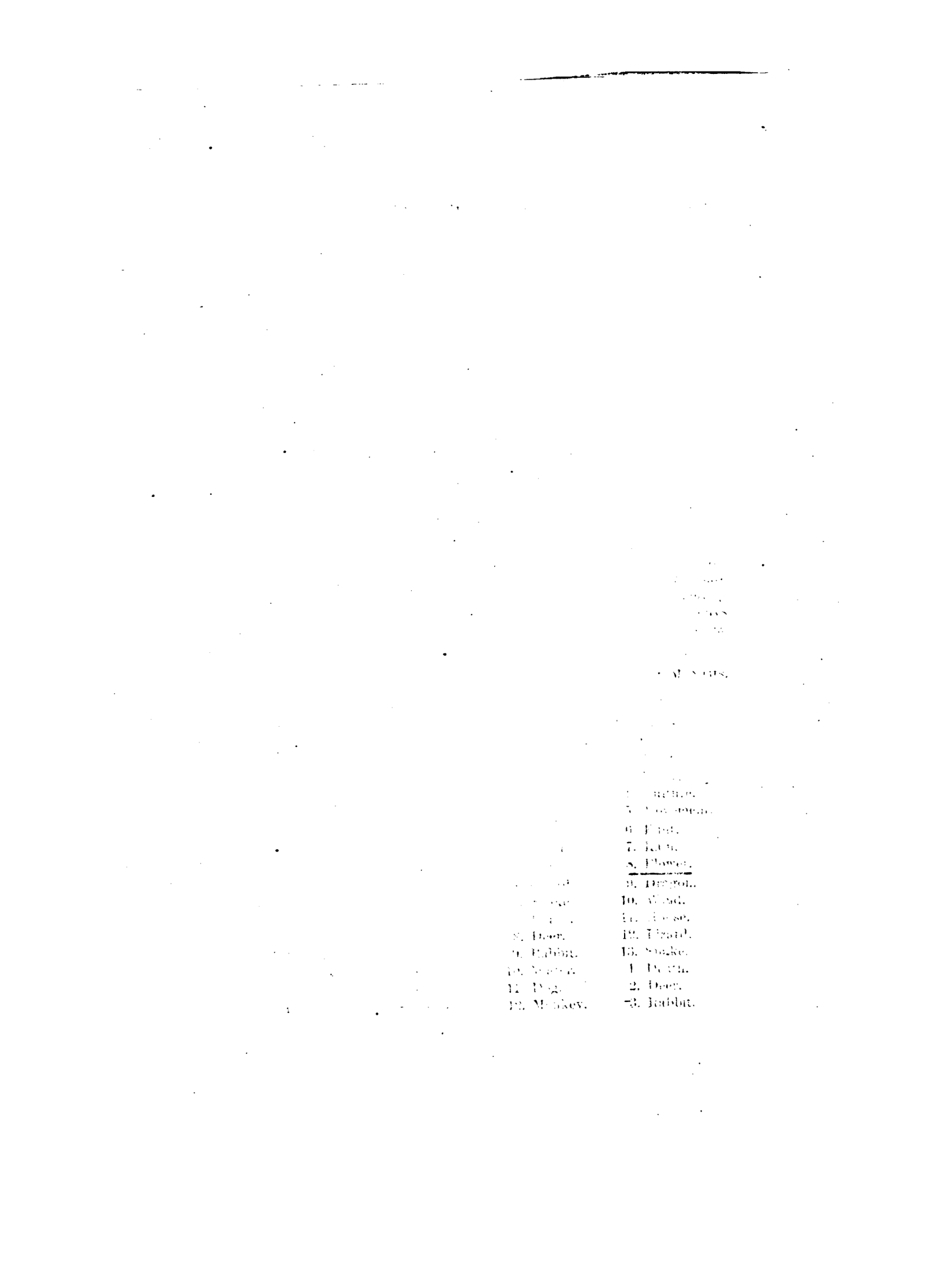
| Tochtli years. | Acatl years. | Tecpatl years. | Calli years. | *Numbers of the months.* | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1 14 | 2 15 | 3 16 | 4 17 | 5 18 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Cozcaquauhtli. | Cipactli..... | Miquiztli.... | Ozomatli..... | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 |
| Ollin..... | Ehecatl..... | Mazatl ..... | Malinalli..... | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 |
| Tecpatl ..... | Calli..... | Tochtli ..... | Acatl ..... | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 |
| Quiahuitl.... | Cuetzpalin.. | Atl ..... | Ocelotl ..... | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 |
| Xochitl..... | Coatl ..... | Itzcuintli.... | Quauhtli..... | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 |
| Cipactli..... | Miquiztli... | Ozomatli..... | Cozcaquauhtli. | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 |
| Ehecatl..... | Mazatl..... | Malinalli ... | Ollin..... | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 |
| Calli ... | Tochtli.... | Acatl..... | Tecpatl ..... | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 |
| Cuetzpalin... | Atl ..... | Ocelotl..... | Quiahuitl .... | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 |
| Coatl ..... | Itzcuinlti... | Quauhtli..... | Xochitl ..... | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 |
| Miquiztli .... | Ozomatli.... | Cozcaquauhtli. | Cipactli..... | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 |
| Mazatl ..... | Malinalli.... | Ollin..... | Ehecatl..... | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 |
| Tochtli..... | Acatl ..... | Tecpatl..... | Calli ..... | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 |
| Atl ..... | Ocelotl..... | Quiahuitl.... | Cuetzpalin... | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 |
| Itzcuintli.... | Quauhtli | Xochitl ..... | Coatl ..... | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 |
| Ozomatli .... | Cozcaquauhtli. | Cipactli..... | Miquiztli ... | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 |
| Malinalli ... | Ollin..... | Ehecatl..... | Mazatl..... | 4 | 11 | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 |
| Acatl..... | Tecpatl..... | Calli ..... | Tochtli ..... | 5 | 12 | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 |
| Ocelotl..... | Quiahuitl ... | Cuetzpalin .. | Atl ..... | 6 | 13 | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 |
| Quauhtli..... | Xochitl..... | Coatl ..... | Itzcuintli.... | 7 | 1 | 8 | 2 | 9 | 3 | 10 | 4 | 11 | 5 | 12 | 6 | 13 |

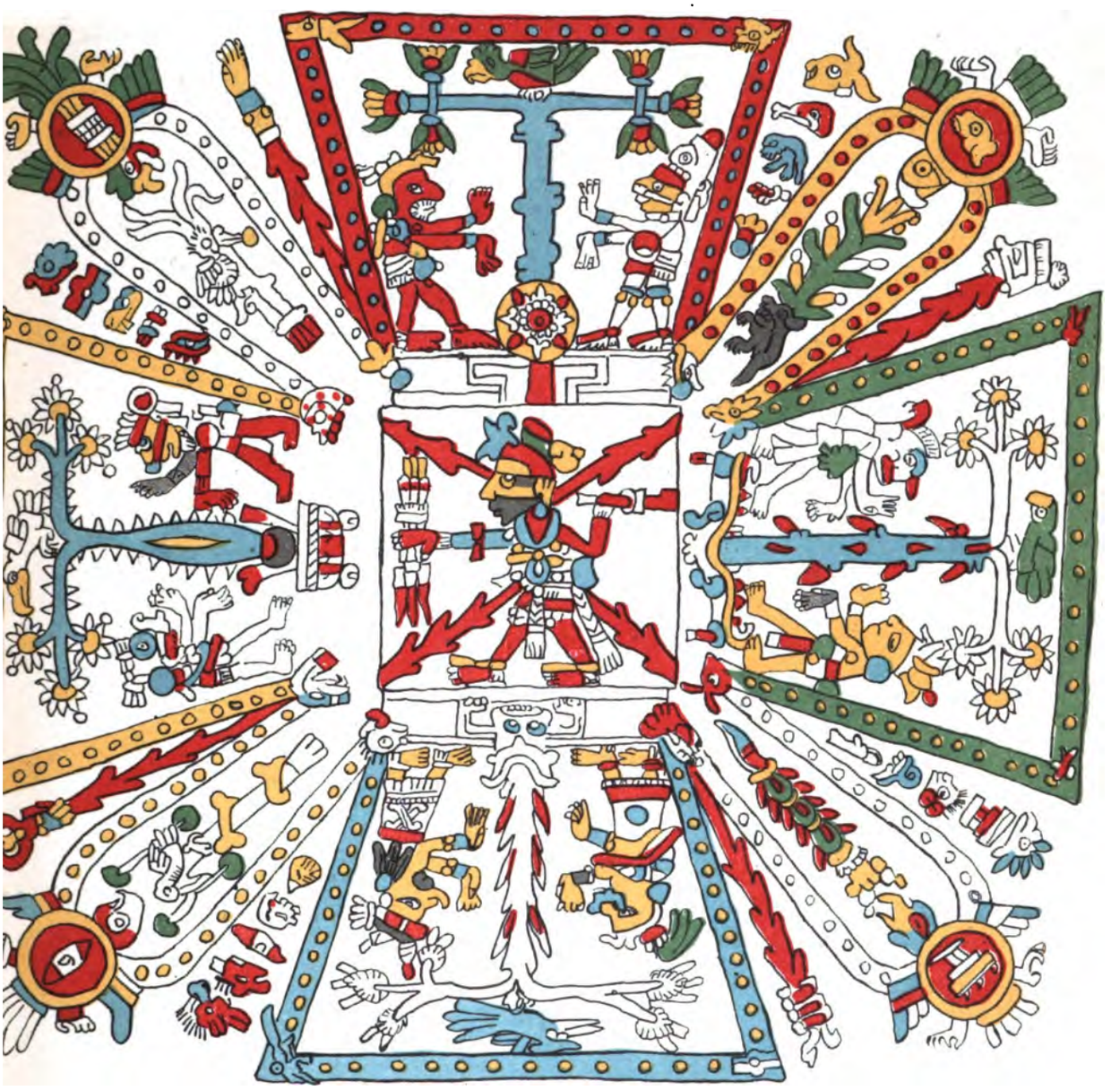
This calendar begins the year *Acatl* with Cipactli to correspond with what I believe to have been the plan on which the Fejervary plate was made; this, as will be seen, does not agree with what is generally supposed to have been the usual method. The following table of days can be used for either year, but commences as the Acatl years in the preceding calendar.

TABLE XV.—A LIST OF MEXICAN DAYS FOR THIRTEEN MONTHS.

[The dark lines indicate the points where the months end.]

| | | | |
|---|---|---|---|
| 1. Dragon. | 5. Flint. | 9. Eagle. | 13. Grass. |
| 2. Wind. | 6. Rain. | 10. Vulture. | 1. Cane. |
| 3. House. | 7. Flower. | 11. Movement. | 2. Tiger. |
| 4. Lizard. | 8. Dragon. | 12. Flint. | 3. Eagle. |
| 5. Snake. | 9. Wind. | 13. Rain. | 4. Vulture. |
| 6. Death. | 10. House. | 1. Flower. | 5. Movement. |
| 7. Deer. | 11. Lizard. | 2. Dragon. | 6. Flint. |
| 8. Rabbit. | 12. Snake. | 3. Wind. | 7. Rain. |
| 9. Water. | 13. Death. | 4. House. | 8. Flower. |
| 10. Dog. | 1. Deer. | 5. Lizard. | 9. Dragon. |
| 11. Monkey. | 2. Rabbit. | 6. Snake. | 10. Wind. |
| 12. Grass. | 3. Water. | 7. Death. | 11. House. |
| 13. Cane. | 4. Dog. | 8. Deer. | 12. Lizard. |
| 1. Tiger. | 5. Monkey. | 9. Rabbit. | 13. Snake. |
| 2. Eagle. | 6. Grass. | 10. Water. | 1. Death. |
| 3. Vulture. | 7. Cane. | 11. Dog. | 2. Deer. |
| 4. Movement. | 8. Tiger. | 12. Monkey. | 3. Rabbit. |





THE MILWAUKEE LITHO. & ENGR. CO.

FAC-SIMILE OF PLATE 44, FEJERVARY CODEX.

4. Water.
5. Dog.
6. Monkey.
7. Grass.
8. Cane.
9. Tiger.
10. Eagle.
11. Vulture.
12. Movement.
13. Flint.
1. Rain.
2. Flower.
3. Dragon.
4. Wind.
5. House.
6. Lizard.
7. Snake.
8. Death.
9. Deer.
10. Rabbit.
11. Water.
12. Dog.
13. Monkey.
1. Grass.
2. Cane.
3. Tiger.
4. Eagle.
5. Vulture.
6. Movement.
7. Flint.
8. Rain.
9. Flower.
10. Dragon.
11. Wind.
12. House.
13. Lizard.
1. Snake.
2. Death.
3. Deer.
4. Rabbit.
5. Water.
6. Dog.
7. Monkey.
8. Grass.
9. Cane.

10. Tiger.
11. Eagle.
12. Vulture.
13. Movement.
1. Flint.
2. Rain.
3. Flower.
4. Dragon.
5. Wind.
6. House.
7. Lizard.
8. Snake.
9. Death.
10. Deer.
11. Rabbit.
12. Water.
13. Dog.
1. Monkey.
2. Grass.
3. Cane.
4. Tiger.
5. Eagle.
6. Vulture.
7. Movement.
8. Flint.
9. Rain.
10. Flower.
11. Dragon.
12. Wind.
13. House.
1. Lizard.
2. Snake.
3. Death.
4. Deer.
5. Rabbit.
6. Water.
7. Dog.
8. Monkey.
9. Grass.
10. Cane.
11. Tiger.
12. Eagle.
13. Vulture.
1. Movement.
2. Flint.

3. Rain.
4. Flower.
5. Dragon.
6. Wind.
7. House.
8. Lizard.
9. Snake.
10. Death.
11. Deer.
12. Rabbit.
13. Water.
1. Dog.
2. Monkey.
3. Grass.
4. Cane.
5. Tiger.
6. Eagle.
7. Vulture.
8. Movement.
9. Flint.
10. Rain.
11. Flower.
12. Dragon.
13. Wind.
1. House.
2. Lizard.
3. Snake.
4. Death.
5. Deer.
6. Rabbit.
7. Water.
8. Dog.
9. Monkey.
10. Grass.
11. Cane.
12. Tiger.
13. Eagle.
1. Vulture.
2. Movement.
3. Flint.
4. Rain.
5. Flower.
6. Dragon.
7. Wind.
8. House.

9. Lizard.
10. Snake.
11. Death.
12. Deer.
13. Rabbit.
1. Water.
2. Dog.
3. Monkey.
4. Grass.
5. Cane.
6. Tiger.
7. Eagle.
8. Vulture.
9. Movement.
10. Flint.
11. Rain.
12. Flower.
13. Dragon.
1. Wind.
2. House.
3. Lizard.
4. Snake.
5. Death.
6. Deer.
7. Rabbit.
8. Water.
9. Dog.
10. Monkey.
11. Grass.
12. Cane.
13. Tiger.
1. Eagle.
2. Vulture.
3. Movement.
4. Flint.
5. Rain.
6. Flower.
7. Dragon.
8. Wind.
9. House.
10. Lizard.
11. Snake.
12. Death.
13. Deer.
1. Rabbit.

| | | | |
|---|---|---|---|
| 2. Water. | 5. Grass. | 8. Eagle. | 11. Flint. |
| 3. Dog. | 6. Cane. | 9. Vulture. | 12. Rain. |
| 4. Monkey. | 7. Tiger. | 10. Movement. | 13. Flower. |

Although the Mexican equivalents of these names may be inferred from what has already been given, I will insert the Mexican and English names of the twenty days here, opposite each other.

TABLE XVI.

| *Mex.* *Eng.* | *Mex.* *Eng.* |
|---|---|
| Cipactli (Dragon). | Ozomatli (Monkey). |
| Ehecatl (Wind). | Malinalli (Grass). |
| Calli (House). | Acatl (Cane). |
| Cuetzpalin (Lizard). | Ocelotl (Tiger). |
| Coatl (Snake). | Quauhtli (Eagle). |
| Miquiztli (Death). | Cozcaquauhtli (Vulture). |
| Mazatl (Deer). | Ollin (Movement). |
| Tochtli (Rabbit). | Tecpatl (Flint). |
| Atl (Water). | Quiahuitl (Rain). |
| Itzcuintli (Dog). | Xochitl (Flower). |

Examining the looped line, Plate III, we notice at each of the outer and inner bends one of the day symbols. (In the plate of the Cortesian Codex there are two.) We therefore take for granted that this is the *first* day of the week, or indication of *thirteen days*, hence we should commence with Cipactli (or Dragon). This we find at the upper right hand corner of the inner square or right base of the large red loop. Judging from the direction of the birds' heads and other facts heretofore noted, we presume the direction in which we are to move is around toward the left. Counting the day symbol as one, and each of the twelve dots up the red line as one day, we come to the symbol in the upper right-hand corner of the loop as the first day of the next week. This we find is Ocelotl (Tiger), just as we find it to be in the calendar table and list of days. Moving along the upper red line to the corner at the left we find the next character is Mazatl (or Deer), agreeing exactly with the calendar and list. Moving down the left red line to the inner corner we come to the symbol for Xochitl (or Flower), also agreeing with the calendar and list. Proceeding from thence up the white line we reach next the symbol for the day Acatl (Cane) in the red circle surrounded by a yellow line. Here we see a marked distinction between this and the other day symbols we have named, a distinction which applies only to the four at the corners—the four year symbols—*Acatl*, *Tecpatl*, *Calli*, and *Tochtli*.

In order that the reader may compare the names in this looped line with the calendar, I present here a scheme of it similar to that given of

the plate from the Cortesian Codex. The explanation given of the other will enable him to make the comparison without further aid.

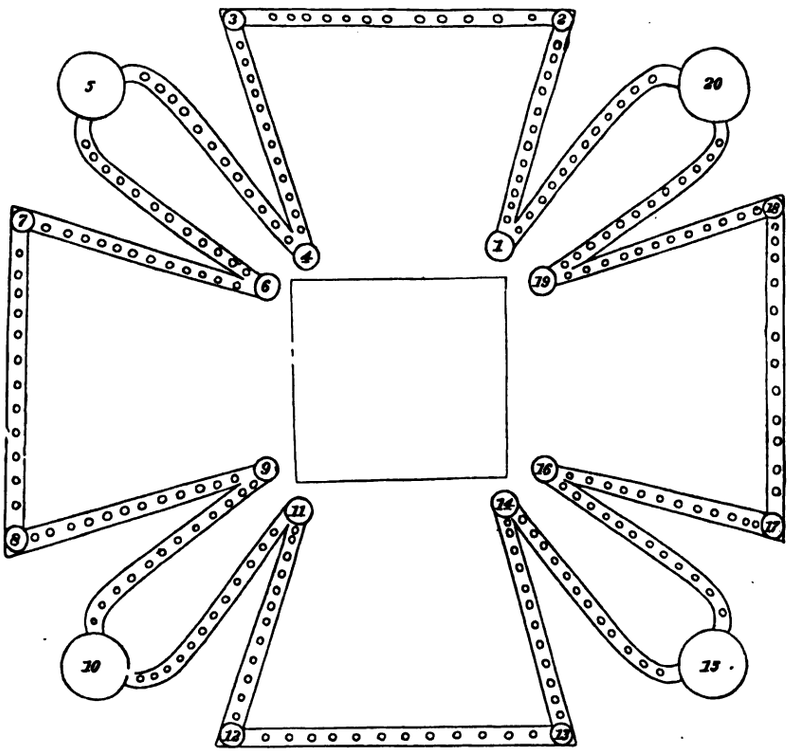



FIG. 6.—Scheme of Plate 44, Fejervary Codex.

The numbers in the little circles at the corners and loops replace the days of the original as follows: 1, Cipactli; 2, Ocelotl; 3, Mazatl; 4, Xochitl; 5, Acatl; 6, Miquiztli; 7, Quiahuitl; 8, Malinalli; 9, Coatl; 10, Tecpatl; 14, Ozomatli; 12, Cuetzpalin; 13, Ollin; 14, Itzcuintli; 15, Calli; 16, Cozcaquauhtli; 17, Atl; 18, Echecatl; 19, Quauhtli; 20, Tochtli.

As before stated, the four groups of five day symbols are found wedged in between the loops at the corners.

In the upper left-hand corner we see the following: Cipactli, Acatl, Coatl, Ollin, and Atl (or, to give the English equivalents in the same order, Dragon, Cane, Snake, Movement, and Water), the same as those of column 1 of Tables XI and XII. In the lower left-hand corner, Ehecatl, Itzcuintli, Tecpatl, Miquiztli, and Ocelotl (Wind, Dog, Flint, Death, and Tiger), the same as column 2; in the lower right-hand corner, Quauhtli, Calli, Ozomatli, Quiahuitl, and Mazatl (Eagle, House, Monkey, Rain, and Deer), the same as column 3; and in the upper right-hand corner, Tochtli, Cozcaquauhtli, Cuetzpalin, Malinalli, and Xochitl

(Rabbit, Vulture, Lizard, Grass, Flower), the same as column 4. But the arrangement of the days in the respective columns, as in the "Table of the Bacabs," varies from that obtained by placing the days of the month in four groups, as heretofore explained.

Turning again to the plate of the Cortesian Codex, as shown in our Plate 2, I call attention first to the heavy black L-shaped figures. I presume from the number—eighteen—and the fact that they are found in the line of weeks they are symbols of, or denote the months, but am unable to suggest any explanation of their use in this connection. I find nothing to correspond with them in either of the plates of the Mexican Codices referred to.

## SYMBOLS OF THE CARDINAL POINTS.

We are now prepared to enter upon the discussion of the symbols of the cardinal points, of which figures have already been given in connection with the quotations from Rosny's work (Fig. 1), but as I shall have occasion to refer to them very frequently I again present them in Fig. 7.

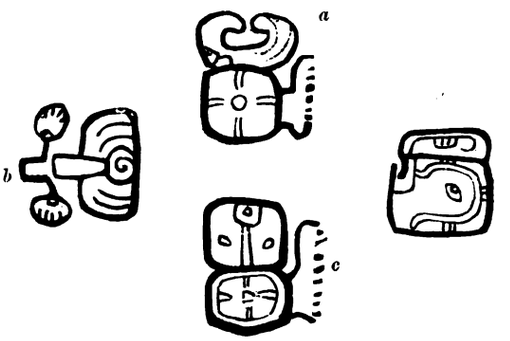



FIG. 7.—Symbols of the cardinal points.

As it is conceded by all who have discussed this subject, that *a* and *c* must be assigned to the east and west or equatorial points, the only dispute being as to which should be referred to the east and which to the west, it follows that the others must be referred to the polar points. As each one of the four areas or compartments contains one of these symbols—the top or upper compartment *a*, the left-hand *b*, the bottom *c*, and the right-hand *d*—we naturally infer that the other figures in these compartments have some reference to the cardinal points with which they are respectively associated.

I think that Rosny is correct in assuming that this plate places these symbols in their proper positions, and hence that if we can determine one with satisfactory certainty this will determine the rest. If their correct positions are given anywhere it would seem that it would be here, in what is evidently a general calendar table or possibly a calendar wheel.

I have already discussed the question of the assignment of the cardinal symbols to some extent in my former work,[14] and will take for granted that the reader is familiar with what is there stated.

That one of the two characters *a* and *c* (Fig. 7), denotes the *east* or sunrise and the other *west* or sunset, may, I think, be safely assumed from what is given in the work mentioned, and from the evidence pre-

[14] Study Manuscript Troano, pp. 69–74.

sented by Rosny,[15] and Schultz-Sellack.[16] But which east and which west is the rock on which the deductions have been, so far, split asunder; Rosny and Schultz-Sellack maintaining that *a* is west and *c* east, and I that *a* is east and *c* west. If we admit that they are correctly placed on this plate it necessitates the admission on my part that I have been incorrect in my reference of two of them. If *a* is east then I have reversed those denoting north and south; if it is west, then I was correct as to those denoting north and south, but have reversed those indicating east and west.

Without at present stating the result of my re-examination of this subject I shall enter at once upon the discussion, leaving this to appear as we proceed.

It is well known that each of the dominical days or year-bearers (*Cuch-haab*, as they were termed by the Mayas), Kan, Muluc, Ix, and Cauac, was referred to one of the four cardinal points. Our first step, therefore, is to determine the points to which these days were respectively assigned.

I have given in my former paper[17] my reasons for believing that Cauac was referred to the south, Kan to the east, Muluc to the north, and Ix to the west, from which I quote the following as a basis for further argument:

"Landa, Cogulludo, and Perez tell us that each of the four dominical days was referred by the Indians to one of the four cardinal points. As the statements of these three authorities appear at first sight to conflict with each other, let us see if we can bring them into harmony without resorting to a violent construction of the language used. Perez' statement is clear and distinct, and as it was made by one thoroughly conversant with the manners and customs of the natives, and also with all the older authorities, it is doubtless correct.

"He says, 'The Indians made a little wheel in which they placed the initial days of the year. *Kan* at the *east*, *Muluc* at the *north*, *Gix* or *Hix* at the *west*, and *Cauac* at the *south*, to be counted in the same order.'

"The statement of Cogulludo, which agrees substantially with this, is as follows: 'They fixed the first year at the east, to which they gave the name *Cuch-haab;* the second at the west, and called it *Hiix;* the the third at the south, named *Cauac*, and the fourth, *Muluc*, at the north.'

"Turning now to Landa's work (*Relac. de las Cosas*, §§ XXXIV), we are somewhat surprised to find the following language: 'The first of these dominical letters is *Kan*. * * * They placed this on the south side. * * * The second letter is *Muluc*, which is placed on the eastern side. * * * The third of these letters is *Yx*, * * * and it signi-

[15] Les. Doc. Ecrit. l'Antiq. Ameriq.
[16] Zeits. für Ethn., 1879.
[17] Study Manuscript Troano, pp. 68-70.

fied the northern side. The fourth letter is *Cauac*, which is assigned to the western side.'

"This, as we see, places Kan at the south, Muluc at the east, Ix at the north, and Cauac at the west, conflicting directly with the statements made by Cogulludo and Perez. If we turn now to the description of the four feasts as given by Landa, and heretofore quoted, I think we shall find an explanation of this difference. From his account of the feast at the commencement of the Kan year (the intercalated days of the Cauac year) we learn that first they made an idol called *Kan-u-uayeyab*, which they bore to the heap of stones on the south side of the village; next they made a statue of the god *Bolon-Zacab*, which they placed in the house of the elected chief, or chief chosen for the occasion. This done they returned to the idol on the southern stone heap, where certain religious ceremonies were performed, after which they returned with the idol to the house, where they placed it *vis-a-vis* with the other, just as we see in the lower division of Plates XX–XXIII of the Manuscript Troano. Here they kept constant vigil until the unlucky days (*Uayeyab-haab*) had expired and the new Kan year appeared; then they took the statue of *Bolon-Zacab* to the temple and the other idol to the heap of stones at the *east* side of the village, where it was to remain during the year, doubtless intended as a constant reminder to the common people of what year was passing.

"Similar transfers were made at the commencement of the other years; at that of Muluc, first to the east, then to the house, and then to its final resting place on the *north* side; of Ix, first to the north, then to the *west*; of Cauac, first to the west, then to the *south*.

"This movement agrees precisely with the order given by Perez; the final resting places of their idols for the year being the cardinal points of the dominical days where he fixes them; that is, Kan at the *east*, Muluc at the *north*, Ix at the *west*, and Cauac at the *south*. There is, therefore, no real disagreement between these authorities on this point."

Most of the modern authors who have touched upon this topic, although in some cases apparently at sea, without any fixed opinion on the subject, are disposed to follow Landa's statement, without comparing it with his account of the supplemental days, and appear to rely upon it rather than upon the statements of Cogulludo and Perez; and hence they refer Kan to the south, Muluc to the east, Ix to the north, and Cauac to the west.

Brasseur, in his *Histoire des Nations civilisées du Mexique et de l'Amérique Centrale*,[18] assigns Kan to the east, Muluc to the north, Hix to the west, and Cauac to the south. But in his supplement to *Études sur le Manuscrit Troano*,[19] and in his note to Landa's *Relacion*,[20] refers Kan to the south, Muluc to the east, Ix to the north, and Cauac to the west,

[18] Vol. III, p. 471. [19] P. 234. [20] P. 209.

although afterwards, in the same work, in a note to Perez' *Cronologia*, he quotes Cogulludo's statement without explanation or objection.

Dr. Brinton, in his *Myths of the New World*,[21] places these dominical days at the same points to which I have assigned them—Kan at the east, &c.—although referring in a note at the same place to the very page of Landa's *Relacion*, where they are assigned as given by Rosny. In a subsequent work, *Hero Myths*, referring to the same passage in Landa, and with Cogulludo's work before him, he assigns them to the same points as Rosny—Kan to the south, &c.—yet without any reference whatever to his former expressed opinion.

Schultz-Sellack, in an article entitled *Die Amerikanischen Gotter der vier Weltrichtungen und ihre Tempel in Palanque*, in the *Zeitschrift für Ethnologie* for 1879,[22] comes to the same conclusion as Rosny.

Rosny's opinion on this subject has already been quoted.[23]

From these facts it is evident that the assignment of the dominical days to their respective cardinal points has not as yet been satisfactorily determined, but that the tendency at the present day is to follow Landa's simple statement rather than Cogulludo and Perez. This is caused, I presume, in part, by the fact that certain colors—yellow, red, white, and black—were also referred to the cardinal points, and because it is supposed that among the Maya nations yellow was appropriated to Kan, red to Muluc, white to Ix, and black to Cauac; and as the first appears to be more appropriate to the south, red to the east or sunrise, white to the north or region of snow, and black to the west or sunset, therefore this is the correct assignment.

But there is nothing given to show that this was the reason for the selection or reference of these colors by the inhabitants of Central America.

This brings another factor into the discussion and widens the field of our investigation; and as but little, save the terms applied to or connected with the dominical days, is to be found in regard to the Maya custom in this respect, we are forced to refer to the Mexican custom as the next best evidence. But it is proper to state first that the chief, and, so far as I am aware, the only, authority for the reference of the colors named to the four Maya days, is found in the names applied to them by Landa.[24]

According to this writer, the other names applied to the *Bacab* of Kan, were *Hobnil*, *Kanil-Bacab*, *Kan-Pauahtun*, and *Kan-Xib-Chac;* to that of Muluc, *Canzienal*, *Chacal-Bacab*, *Chac-Pauahtun*, and *Chac-Xib-Chac;* to that of Ix, *Zac-Ziui*, *Zacal-Bacab*, *Zac-Pauahtun*, and *Zac-Xib-Chac;* and to that of Cauac, *Hozen-Ek*, *Ekel-Bacab*, *Ek-Pauahtun*, and *Ek-Xib-Chac*. As *Kan* or *Kanil* of the first signifies *yellow*, *Chac* or *Chacal* of the second signifies *red*, *Zac* or *Zacal*, of the third *white*, and *Ek* or *Ekel*,

[21] P. 82.
[22] P. 209.
[23] See also hisDechiff. Ecrit. Hierat., p. 42.
[24] Relacion, p.208.

of the fourth *black*, it has been assumed, and, I think, correctly, that these colors were usually referred to these days, or rather to the cardinal points indicated, respectively, by these day symbols. If there is any other authority for this conclusion in the works of the earlier writers, I have so far been unable to find it.

If the figures in our plate are properly and distinctly colored in the original Codex Cortesianus, this might form one aid in settling this point, but, as we shall hereafter see, the colors really afford very little assistance, as they are varied for different purposes.

Rosny gives us no information on this point, hence our discussion must proceed without this knowledge, as we have no opportunity of referring to the original. I may remark that it is the opinion of the artist, Mr. Holmes, from an inspection of the photograph, that the plate was at least partially colored.

M. de Charencey, who has studied with much care the custom of identifying colors with the cardinal points in both the New and Old World, believes that in Mexico and Central America the original system was to refer yellow to the east, black to the north, white to the west, and red to the south.[25]

When we turn to the Mexican system we find the data greatly increased, but, unfortunately, the difficulties and confusion are increased in like proportion. Here we have not only the four dominical days and the four colors, but also the four ages, four elements, and four seasons, all bearing some relation in this system to the four cardinal points. It will be necessary, therefore, for us to carry along with us these several ideas in our attempt to arrive at a satisfactory conclusion on this complicated and mystified subject.

Before referring to the codices I will present the conclusions of the principal authorities who have devoted any attention to this question. Sahagun says, "The names that they gave to the four parts of the earth are these: Vitzlampa, the south; Tlapcopcopa, the east; Mictlampa, the north; Coatlampa, the west. The names of the figures dedicated to these parts are these: Tochtli, the rabbit, was dedicated to Vitzlampi, the south; Acatl, the cane, to the east; Tecpatl, the flint, to the north; Calli, the house, to the west; * * * * and at the end of fifty-two years the count came back to *Cetochtliacatl*, which is the figure of the reed, dedicated to the east, which they called *Tlapcopcopa* and *Tlavilcopa*, nearly towards the fire or the sun. Tecpatl, which is the figure of a flint, was dedicated to Mictlampa, nearly towards hell, because

[25] *Des couleurs consideres comme Symboles des Points de l'Horizon chez des Peuples du Nouveau Monde*, in *Actes de la Societe Philologique*, tome VI. See also his *Recherches sur les Noms des Points de l'Espace*, in *Mem. Acad. Nat. Sci. et Arts et Belles Lettres de Caen*, 1882.

Since the above was written I have received a copy of his *Ages ou Soleils*, in which he gives the Mexican custom of assigning the colors as follows: blue to the south, red to the east, yellow to the north, and green to the west.—P. 40.

they believed that the dead went towards the north. For which reason, in the superstition which represented the dead as covered with mantas (cloths) and their bodies bound, they made them sit with their faces turned toward the north, or Mictlampa. The fourth figure was the house, and was dedicated to the west, which they called Cioatlampa, which is nearly toward the house of the women, for they held the opinion that the dead women, who are goddesses, live in the west, and that the dead men, who are in the house of the sun, guide him from the east with rejoicings every day, until they arrive at midday, and that the defunct women, whom they regard as goddesses, and call Cioapipiltin, come out from the west to receive him at midday and carry him with rejoicing to the west."[26]

Veytia's statement in regard to the same subject is as follows:

"The symbols, then, which were used in the aforesaid monarchies for the numeration of their years were these four: Tecpatl, that signifies flint; Calli, the house; Tochtli, the rabbit; and Acatl, the reed. * * * The material signification of the names are those just given, but the allegories that they wished to set forth by them are the four elements, which they understood to be the origin of all composite matter, and into which all things could be resolved.

"They gave to fire the first place, as the most noble of all, and symbolized it by the flint. * * * By the hieroglyphic of 'the house' they represent the element earth, and gave it the second place in their initial characters.

"By the rabbit they symbolized the air, * * * and represented it in various ways, among which was the sign of the holy cross. * * *

"Finally the fourth initial character, which is the reed, which is the proper meaning of the word Acatl, is the hieroglyphic of the element water.'[27]

At page 48: "It is to be noted that most of the old calendars—those of the cycles as well as those of years and months, which they used to form in circles and squares, ran from the right to the left, in the way the orientals write and not as we are accustomed to form such figures. * * * But they did not maintain this order in the figures that they painted and used as hieroglyphics in them, but placed them some looking to one side and some to the other."

Gemelli Carreri[28] writes as follows in regard to the Mexican calendar system:

"A snake turned itself round into a circle and in the body of the serpent there were four divisions. The first denoted the south, in that language call'd *Uutzlampa*, whose hieroglyphick was a rabbit in a blew field, which they called *Tochtli*. Lower was the part that signify'd the east, called *Tlacopa* or *Tlahuilcopa*, denoted by a cane in a red field,

[26] Hist. Gen. de las Cosas de Nueva Espana, tome 2, p. 256.
[27] Hist. Ant. Mex., vol. 1, p. 42.
[28] Churchill's Voyages, vol. IV, pp. 491, 492.

call'd *Acatl*. The hieroglyphick of the north, or Micolampa, was a sword pointed with flint, call'd *Tecpatl*, in a yellow field. That of the west or *Sihuatlampa*, was a house in a green field, and called *Cagli*. * * *

"These four divisions were the beginning of the four terms that made up the age. Between every two on the inside of the snake were twelve small divisions, among which the four first names or figures were successively distributed, giving every one its number to thirteen, which was the number of years that composed an indication; the like was done in the second indication with the same names from one to thirteen, and so in the third and fourth, till they finished the circle of fifty-two years. * * * From what has been said above, there arise several doubts; the first is, why they begin to reckon their years from the south; the second, why they made use of the four figures, of a rabbit, a cane, a flint, and a house."

He then goes on to state that the Mexicans believed the sun or light first appeared in the south, and that hell or inferno was in the north; then adds the following:

"Having found this analogy between the age and the year, they would carry the similitude or proportions on further, and, as in the year there are four seasons, so they would adapt the like to the age, and accordingly they appointed *Tochtli* for its beginning in the south, as it were, the spring and youth of the sun's age; *Acatl* for the summer, *Tecpatl* for the autumn, and *Cagli* for his old age or winter.

"These figures so disposed were also the hieroglyphicks of the elements, which is the second doubt; for *Tochtli* was dedicated to *Tevacayohua*, god of earth; *Acatl* to *Tlalocatetuhtli*, god of water; *Tecpatl* to *Chetzahcoatl*, god of air; and *Cagli* to *Xiuhtecuhil*, god of fire. * * *

"The days *Cipactli*, *Michitzli*, *Ozomatli*, and *Cozcaquauhtli* are companions to—that is, in all respects follow—the order of the four figures that denote the years of an age, viz, *Tochtli*, *Acatl*, *Tecpatl*, and *Cagli*, to signify that every year whose symbol is *Tochtli* will have *Cipactli* for the first day of the month; that whose symbol or distinctive mark is *Acatl* will have *Michitzli* for the first of the month; *Tecpatl* will have *Ozomatli*, and *Cagli* will have *Cozcaquauhtli*."

Clavigero[29] agrees with Gemelli in reference to the correspondence of the year symbols with the first days of the years, and inserts the following remark in a note:

"Cav. Boturini says that the year of the rabbet began uniformly with the day of the rabbet, the year of the cane with the day of the cane, &c., and never with the days which we have mentioned; but we ought to give more faith to Siguenza, who was certainly better informed in Mexican antiquity. The system of this gentleman is fantastical and full of contradictions."

From this statement we infer that Siguenza held the same opinion on this point as Clavigero and Gemelli.

[29] Hist. Mex. Cullen's Transl., I, 292.

Boturini[30] gives the following arrangement of the "symbols of the four parts or angles of the world," comparing it with that of Gemelli.

| "Gemelli. | "Boturini. |
|---|---|
| 1. Tochtli = South. | 1. Tecpatl = South. |
| 2. Acatl = East. | 2. Calli = East. |
| 3. Tecpatl = North. | 3. Tochtli = North. |
| 4. Calli = West." | 4. Acatl = West." |

SYMBOLS OF THE FOUR ELEMENTS.

| "Gemelli. | "Boturini. |
|---|---|
| 1. Tochtli = Earth. | 1. Tecpatl = Fire. |
| 2. Acatl = Water. | 2. Calli = Earth. |
| 3. Tecpatl = Air. | 3. Tochtli = Air. |
| 4. Calli = Fire." | 4. Acatl = Water." |

Herrera speaks only of the year symbols and colors, and, although he does not directly connect them, indicates his understanding in regard thereto by the order in which he mentions them:[31]

"They divided the year into four signs, being four figures, the one of a house, another of a rabbit, the third of a cane, the fourth of a flint, and by them they reckoned the year as it passed on, saying, such a thing happened at so many houses or at so many flints of such a wheel or rotation, because their life being as it were an age, contained four weeks of years consisting of thirteen, so that the whole made up fifty-two years. They painted a sun in the middle from which issued four lines or branches in a cross to the circumference of the wheel, and they turned so that they divided it into four parts, and the circumference and each of them moved with its branch of the same color, which were four, *Green*, *Blue*, *Red*, and *Yellow*; and each of those parts had thirteen subdivisions with the sign of a house, a rabbit, a cane, or a flint."

From this statement I presume his arrangement would be as follows:

Calli —Green.
Tochtli —Blue.
Acatl —Red.
Tecpatl—Yellow.

Still, this is at best but a supposition. It is evident that he had before him or referred to a wheel similar to that figured by Duran in his *Historia de las Indias*, as his description agrees with it in every respect, except as to the arrangement of the colors.

According to Duran[32] "The circle was divided into four parts, each part containing thirteen years, the first part pertaining to the east, the second to the north, the third to the west, and the fourth to the south.

[30] *Idea de Una Nueva Historia General de la America Septentrional*, pp. 54–56.
[31] Hist. Amer. Dec. II, B. 10, Chap. 4. Transl. vol. 3, pp. 221–222.
[32] *Historia de las Indias de Nueva Espana, Mexico*, 1880. Tom. II., pp 252-253.

The first part, which pertained to the east, was called the thirteen years of the *Cane*, and in each house of the thirteen was painted a cane, and the number of the corresponding year. * * * The second part applied to the north, in which were other thirteen houses (divisions), called the thirteen houses of the *Flint*, and there were also painted in each one a flint and the number of the year. * * * The third part, that which appertained to the west, was called the thirteen *Houses;* there were also painted in this thirteen little houses, and joined to each the number of the year. * * * In the fourth and last part were other thirteen years called the thirteen houses of the *Rabbit*, and in each of these houses were also likewise painted the head of a rabbit, and joined to it a number."

The plate or figure accompanying this statement[33] is a wheel in the form shown in Fig. 8, the quadrant *a* green, with thirteen figures of the

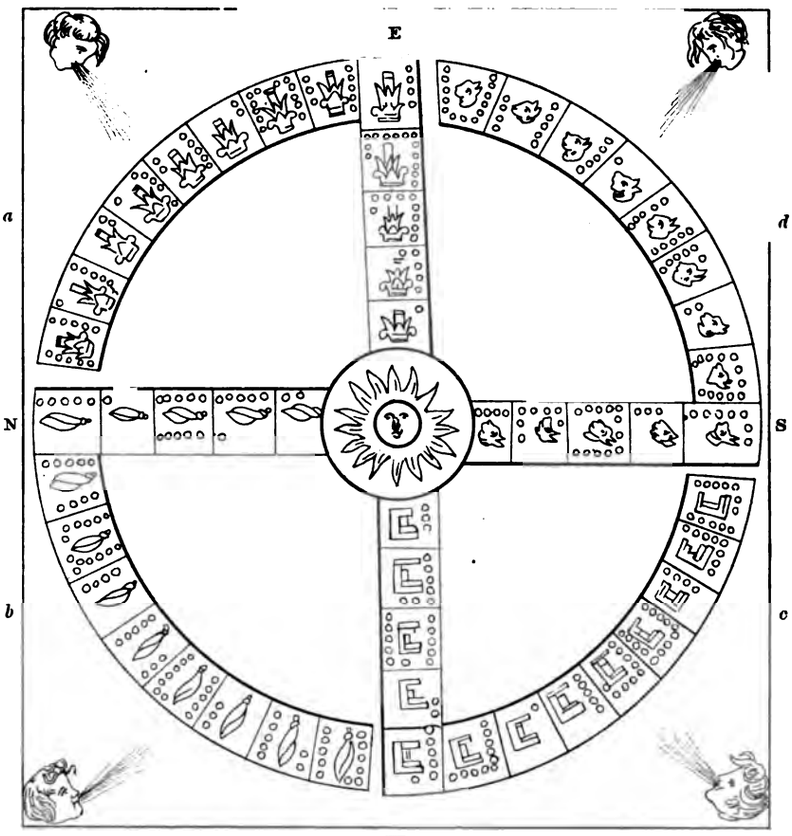



FIG. 8—Calendar wheel from Duran.

cane in it; *b* red, with thirteen figures of the flint in it; *c* yellow with thirteen figures of the house in it, and *d* blue, with thirteen figures of

[33] Trat°. 3° Lam 1ª.

the rabbit's head in it, each figure with its appropriate numeral. At the top is the word "Oriente," at the left "Norte," at the bottom "Occidente," and at the right "Sur."

Although this figure was evidently made by this author or for him, it expresses his understanding of the assignment of the years and arrangement of the colors as ascertained from the data accessible to him.

His arrangement will therefore be as follows:

Acatl — East — Green.
Tecpatl — North — Red.
Calli — West — Yellow.
Tochtli — South — Blue.

We find the same idea frequently expressed in the codices now accessible, as, for example, the Borgian and the Vatican B, though the colors do not often correspond with Duran's arrangement.

Shultz-Sellack,[34] in his article heretofore quoted, arranges the colors in connection with the dominical days in the Maya system as follows:

Kan — South — Yellow.
Muluc — East — Red.
Ix — North — White.
Cauac — West — Black.

He does not appear to be so clear in reference to the Mexican system, in fact he seems to avoid the question of the assignment of the year symbols. His arrangement, as far as I can understand it, is as follows:

— ? Quetzalcoatl — South — Wind — Yellow.
— ? Huitzilopuchtli — East — Fire — Red.
— ? Tezcatlipoca — North — Water — White.
— ? Tlaloc — West — Earth — Black.

Orozco y Berra[35] gives his preference to the opinion of Sahagun, which has already been quoted, and which is the same as that held by Torquemada.[36]

The most thorough and extensive discussion of this subject which has so far been made, is by Dr. D. Alfredo Chavero, in the *Anales del Museo Nacional de Mexico.*[37]

According to this author, who had access not only to the older as well as more recent authorities usually referred to, but also to the manuscript of Fabrigat and the Codex Chimalpopoca or Quauhtitlan, the order of the year symbols or year bearers—Tecpatl, Calli, Acatl, and Tochtli—varied "*segun les pueblos,*" the Toltecs commencing the cycle with *Tecpatl*, those of Teotihuacan with *Calli*, those of Tezcuco with

[34] Zeit. für Ethnologie, 1879.
[35] Anales Mus. Mex., I, Entrag. 7, p. 299.
[36] Monarq. Indiana, lib. X, cap. 36.
[37] Tom. 1, Entrag. 7, tom. II, and continued in tom. III.

*Acatl*, and the Mexicans with *Tochtli*.[38] He also shows that the relation and order of the four ages or creations and elements in regard to the cardinal points, are by no means uniform, not only in the Spanish and early authorities, but in the codices and monuments (supposing his interpretation to be correct).

His arrangement, as derived from the leading codices, is as follows:

Tochtli — South — Earth.
Acatl — East — Water.
Tecpatl — North — Fire.
Calli — West — Air.

In order that the various views may be seen at a glance, I give here a tabulated *résumé:*

MEXICAN SYMBOLS OF THE CARDINAL POINTS.

*Veytia.*

1. Tecpatl — Flint — Fire.
2. Calli — House — Earth.
3. Tochtli — Rabbit — Air.
4. Acatl — Cane — Water.

*Sahagun.*

1. Tochtli — Rabbit — South.
2. Acatl — Cane — East. "Toward the fire or sun."
3. Tecpatl — Flint — North. "Nearly towards hell."
4. Calli — House — West. "Towards the house of women."

*Gemelli.*

1. Tochtli — Rabbit — South — Blue — Earth — Cipactli.
2. Acatl — Cane — East — Red — Water — Michiztli.
3. Tecpatl — Flint — North — Yellow — Air — Ozomatli.
4. Calli — House — West — Green — Fire — Cozcaquauhtli.

*Boturini.*

1. Tecpatl — Flint — South — Fire.
2. Calli — House — East — Earth.
3. Tochtli — Rabbit — North — Air.
4. Acatl — Cane — West — Water.

*Herrera.*

Calli — House — Green.
Tochtli — Rabbit — Blue.
Acatl — Cane — Red.
Tecpatl — Flint — Yellow.

[38] A fact mentioned by Leon y Gama (Dos Piedras, pt. I, p. 16), and Veytia (Hist. Antiq. Mej., tom. I, p. 58). See, also, Müller, *Reisen*, tom. III, p. 65, and Boturini, Idea, p. 125.

*Duran.*

1. Acatl — Cane — East — Green.
2. Tecpatl — Flint — North — Red.
3. Calli — House — West — Yellow.
4. Tochtli — Rabbit — South — Blue.

*Schultz-Sellack.*

1.— ? — Quetzalcoatl — South — Wind — Yellow.
2.— ? — Huitzilopuchtli — East — Fire — Red.
3.— ? — Tezcatlipoca — North — Water — White.
4.— ? — Tlaloc — West — Earth — Black.

*Charencey.*

1.— ? — East — Yellow.
2.— ? — North — Black.
3.— ? — West — White.
4.— ? — South — Red.[39]

*Orozco y Berra.*

1. Tochtli — Rabbit — South — Air.
2. Acatl — Cane — East — Water.
3. Tecpatl — Flint — North — Fire.
4. Calli — House — West — Earth.

*Chavero.*

1. Tochtli — Rabbit — South — Earth.
2. Acatl — Cane — East — Water.
3. Tecpatl — Flint — North — Fire.
4. Calli — House — West — Air.

Judging from the differences shown in these lists, we are forced to the conclusion that no entirely satisfactory result has been reached in reference to the assignment of the different symbols to the cardinal points; still a careful analysis will bring out the fact that there is a strong prevalency of opinion on one or two points among the earlier authorities. In order that this may be seen I present here a list in a different form from the preceding.

[39] I see from Charencey's "*Ages ou Soleils*," just received, that he concludes the arrangement by the Mexicans was as follows:

1. Tochtli — Rabbit — Blue — Earth — South.
2. Acatl — Cane — Red — Water — East.
3. Tecpatl — Flint — Yellow — Air — North.
4. Calli — House — Green — Fire — West.

REFERENCE OF THE YEARS TO THE CARDINAL POINTS.

| | *Tochtli* — | *Acatl* — | *Tecpatl* — | *Calli.* |
|---|---|---|---|---|
| Sahagun | — South | — East | — North | — West. |
| Gemelli | — South | — East | — North | — West. |
| Duran | — South | — East | — North | — West. |
| Orozco y Berra | — South | — East | — North | — West. |
| Chavero | — South | — East | — North | — West. |
| Torquemada | — South | — East | — North | — West. |
| Boturini | — North | — West | — South | — East. |

REFERENCE OF COLORS TO THE CARDINAL POINTS.

| | *South* | — *East* | — *North* | — *West.* |
|---|---|---|---|---|
| Gemelli | — Blue | — Red | — Yellow | — Green. |
| Duran | — Blue | — Green | — Red | — Yellow. |
| Charencey[40] | — Red | — Yellow | — Black | — White. |
| Schultz-Sellack | — Yellow | — Red | — White | — Black. |

REFERENCE OF ELEMENTS TO THE CARDINAL POINTS.

| | *South* | — *East* | — *North* | — *West.* |
|---|---|---|---|---|
| Gemelli | — Earth | — Water | — Air[41] | — Fire. |
| Boturini | — Fire | — Earth | — Air | — Water. |
| Schultz-Sellack | — Air | — Fire | — Water | — Earth. |
| Chavero | — Earth | — Water | — Fire | — Air. |

REFERENCE OF THE ELEMENTS TO THE YEARS.

| | *Tochtli* — | *Acatl* — | *Tecpatl* — | *Calli* |
|---|---|---|---|---|
| Veytia | — Air | — Water | — Fire | — Earth. |
| Gemelli | — Earth | — Water | — Air | — Fire. |
| Boturini | — Air | — Water | — Fire | — Earth. |
| Chavero | — Earth | — Water | — Fire | — Air. |
| Orozco y Berra | — Air | — Water | — Fire | — Earth. |

As will be seen from this list, there is entire uniformity in the assignment of the years or year symbols to the cardinal points, with the single exception of Boturini. As this author's views in regard to the calendar are so radically different from all other authorities as to induce the belief that it applies to some other than the Aztec or true Mexican calendar we will probably be justified in eliminating his opinion from the discussion.

Omitting this author, we have entire uniformity among the authorities named in regard to the reference of the years to the cardinal points, as follows:

*Tochtli* to the *south; Acatl* to the *east; Tecpatl* to the *north*, and *Calli* to the *west.*

[40] See note 39 on page 47.

[41] By "air" in this connection "wind" is really intended.

The reference of the colors and the elements to the cardinal points is too varied to afford us any assistance in arriving at a conclusion in this respect. In the assignment of the elements to the years we find that water is referred by all the authorities named to *Acatl*, and fire by all but one (Gemelli), to *Tecpatl*.

One thing more must be mentioned before we appeal directly to the codices. As the groups of five days, so often heretofore referred to, were assigned to the cardinal points, it is proper to notice here what is said on this point. So far, I have found it referred to only in the Exposition of the Vatican Codex and by Schultz-Sellack in the article before cited.

As the latter refers to them by numbers only, I give here a list of the Mexican days, with numbers corresponding with the positions they severally hold in their regular order.

| *First column.* | *Second column.* | *Third column.* | *Fourth column.* |
|---|---|---|---|
| 1. Cipactli. | 2. Ehecatl. | 3. Calli. | 4. Cuetzpalin. |
| 5. Coatl. | 6. Miquitzli. | 7. Mazatl. | 8. Tochtli. |
| 9. Atl. | 10. Itzquintli. | 11. Ozomatli. | 12. Malinalli. |
| 13. Acatl. | 14. Ocelotl. | 15. Quauhtli. | 16. Cozcaquauhtli. |
| 17. Ollin. | 18. Tecpatl. | 19. Quiahuitl. | 20. Xochitl. |

Using the numbers only, 1, 5, 9, 13, and 17 will denote the first column; 2, 6, 10, 14, and 18 the second, &c.

Schultz-Sellack states that:

4, 8, 12, 16, 20 were assigned to the south.
1, 5, 9, 13, 17, to the east.
2, 6, 10, 14, 18, to the north.
3, 7, 11, 15, 19, to the west.

But, as he only quotes from the explanation of the Vatican Codex as given by Kingsborough,[42] I will present here the statement of this authority:

"Thus they commenced reckoning from the sign of One Cane. For example: One Cane, two, three, &c., proceeding to thirteen; for, in the same way, as we have calculations in our repertories by which to find what sign rules over each of the seven days of the week, so the natives of that country had thirteen signs for the thirteen days of their week; and this will be better understood by an example. To signify the first day of the world, they painted a figure like the moon, surrounded with splendor, which is emblematical of the deliberation which they say their god held respecting the creation, because the first day after the commencement of time began with the second figure, which was One Cane. Accordingly, completing their reckoning of a cycle at the sign of Two Canes, they counted an Age, which is a period of fifty-two years, because,

[42] Kingsborough, vol. VI, pp. 196, 197.

on account of the bissextile years which necessarily fell in this sign of the Cane, it occurred at the expiration of every period of fifty-two years. Their third sign was a certain figure which we shall presently see, resembling a serpent or viper, by which they intended to signify the poverty and labors which men suffer in this life. Their fourth sign represented an earthquake, which they called Nahuolin, because they say that in that sign the sun was created. Their fifth sign was Water, for, according to their account, abundance was given to them in that sign. [The five days Cipactli, Acatl, Coatl, Ollin, Atl.] These five signs they placed in the upper part, which they called Tlacpac, that is to say, the east. They placed five other signs at the south, which they named Uitzlan, which means a place of thorns—the first of which was a flower, emblematical of the shortness of life, which passes away quickly, like a blossom or flower. The second was a certain very green herb, in like manner denoting the shortness of life, which is as grass. The third sign was a lizard, to show that the life of man, besides being brief, is destitute, and replete with the ills of nakedness and cold, and with other miseries. The fourth was a certain very cruel species of bird which inhabits that country. The fifth sign was a rabbit, because they say that in this sign their food was created, and accordingly they believed that it presided over drunken revels. [Xochitl, Malinalli, Cuetzpalin, Cozcaquauhtli, Tochtli.] They placed five other signs at the west, which region they called Tetziuatlan. The first was a deer, by which they indicated the diligence of mankind in seeking the necessaries of life for their sustenance. The second sign was a shower of rain falling from the skies, by which they signified pleasure and worldly content. The third sign was an ape, denoting leisure time. The fourth was a house, meaning repose and tranquillity. The fifth was an eagle, the symbol of freedom and dexterity. [Mazatl, Quiahuitl, Ozomatli, Calli, Quauhtli.] At the north, which they call Teutletlapan, which signifies the place of the gods, they placed the other five signs which were wanting to complete the twenty. The first was a tiger, which is a very ferocious animal, and accordingly they considered the echo of the voice as a bad omen and the most unlucky of any, because they say that it has reference to that sign. The second was a skull or death, by which they signified that death commenced with the first existence of mankind. The third sign was a razor or stone knife, by which are meant the wars and dissensions of the world; they call it Tequepatl. The fourth sign is the head of a cane, which signifies the devil, who takes souls to hell. The fifth and last of all the twenty signs was a winged head, by which they represented the wind, indicative of the variety of worldly affairs." [Ocelotl, Miquiztli, Tecpatl, Itzquintli, Ehecatl.]

According, therefore, to this author the first column was assigned to the East, the second to the North, the third to the West, and the fourth

to the South. He also says that the counting of the years began with 1 Cane.[43]

Turning now to Plate 44 of the Fejervary Codex (our Plate III), we notice that the symbols of the days of the first column are wedged in between the loops of the upper left-hand corner, and that here we also find the symbol of the year-bearer, *Acatl*, in the red circle at the outer extremity of the loop. Here, then, according to the expounder of the Vatican Codex, is the east, and this agrees also with all the other authorities except Boturini. As these day symbols are between the red and yellow loops, the next point to be determined is to which of the two they belong.

This is a very important point, the determination of which must have a strong bearing on our decision as to the cardinal points. As it is here that the apparently strongest evidence against my conclusion is to be found, it is necessary that I explain somewhat fully my reasons for deciding against this apparent evidence.

If we take for granted that the day columns relate to the large angular loops, then the column in the upper right-hand corner would seem to belong to the top or red loop and not to the one on the right; and the column in the upper left-hand corner to the left or yellow loop and not to that at the top, and so on. This I concede is a natural inference which it is necessary to outweigh by stronger evidence.

In the first place it is necessary to bear in mind that although the sides of the plate, that is to say the large loops, are spoken of as facing the cardinal points, yet it is possible the artist intended that the corner or round loops should indicate the cardinal points, as here are found the days assigned to these quarters.

Even admitting that the large angular loops indicate the cardinal points, we must suppose the figures of one corner, either those at the right or left, belong respectively to them. As the symbols of the year-bearers Acatl, Tecpatl, Calli, and Tochtli have peculiar marks of distinction, we are justified in believing that this distinction is for the purpose of signifying the quarter to which they belong. Examining carefully the bird on the symbol for Acatl in the upper left-hand corner loop, we find that it can be identified only with that on the tree in the top or red angular loop. It is true the identification in the other cases is not so certain, but in this case there can be very little doubt, as the green top-knot, the peculiar beak, and green feathers are sufficient of themselves to connect the upper left-hand white loop and figures of this corner with the top red loop and figures embraced in it.

Studying the plate carefully and also our scheme of it—Fig. 6—we observe that Cipactli is found at the right base of the red loop, Miquitzli at the right base of the yellow loop (the center of the plate being considered the point of observation), Ozomatli at the right base of the blue

[43] See also Chavero's statement to the same purpose, Anales Mus. Mex., tom. 11, entrag. 4, p. 244.

loop, and Cozcaquauhtli at the right base of the green loop (but in this case it can be determined only by the order, not by the figure). These are the four days, as is well known, on which the Mexican years begin.

I take for granted, therefore, that the year *Acatl* or Cane applies to the top or red loop. This, I am aware, necessitates commencing the year with 1 Cipactli, thus apparently contradicting the statement of Gemelli that the Tochtli year began with Cipactli. But it must be borne in mind that this author expressly proceeds upon the theory that the counting of the years began in the south with Tochtli. If the count began with 1 Cane, as both the expounder of the Vatican Codex and Duran affirm, Cipactli would be the first day of this year, as it appears evident from the day lists in the Codices that the first year of all the systems commenced with this day. That Acatl was assigned to the east is affirmed by all authorities save Boturini, and this agrees very well with the plate now under consideration. There is one statement made by the expounder of the Vatican Codex which not only enables us to understand his confused explanation, but indicates clearly the kind of painting he had in view, and tends to confirm the opinion here advanced.

He says that "to signify the first day of the world they painted a figure like the moon," &c. Let us guess this to be Cipactli, as nothing of the kind named is to be found. The next figure was a cane; their third figure was a serpent; their fourth, earthquake (Ollin); their fifth, water. "These five signs they placed in the *upper part*, which they called *Tlacpac*, that is to say, the *east*." That he does not mean that these days followed each other consecutively in counting time must be admitted. That he saw them placed in this order in some painting may be inferred with positive certainty. It is also apparent that they are the five days of the first column in the arrangement of the Mexican days shown in Table No. XI, though not in the order there given, which is as follows:

Dragon, Snake, Water, Cane, Movement.

The order in which they are placed by this author is this:

Dragon? Cane, Serpent, Movement, Water.

Which, by referring to page 35, we find to be precisely the same as that of the five days wedged in between the loops in the *upper* left-hand corner of Plate 44 of the Fejervary Codex; thus agreeing in order and position with this author's statement. Duran, as we have seen, also places the east at the top. The same thing is true in regard to the calendar wheel from the book of Chilan Balam hereafter shown.

Accordingly, I conclude that the top of this plate—the red loop—will be east; the left-hand or yellow loop, north; the bottom or blue loop, west, and the right-hand or green loop, south. This also brings the year Acatl to the east, Tecpatl to the north, Calli to the west, and Tochtli to

the south. As the commencement was afterwards changed to Tochtli, as we are informed by Chavero (and as appears to be the case in the Borgian Codex), it would begin at the south, just as stated by Gemelli and other early writers, who probably refer to the system in vogue at the time of the conquest.

Shultz-Sellack alludes to this plate in his article heretofore quoted, but considers the red loop the south, notwithstanding his assignment of red among the Aztecs to the east. He was led to this conclusion, I presume, by two facts: First, the close proximity of the fourth column of days to this red loop, and second, the figure of the sun at the foot of the tree or cross, the sun of the first creation having made its appearance, according to Mexican mythology, in the south. But it is far more likely that the artist intended here to be true to known phenomena rather than to a tradition which was in contradiction to them. The presence of this figure *above* the horizon is, I think, one of the strongest possible proofs that this part of the plate denotes the east.

According to Gemelli[44] the south was denoted by a "blue field," and the symbol Tochtli; east by a red field, and the symbol Acatl; the north by a "yellow field," and the symbol Tecpatl, and the west by a "green field," and the symbol Calli. In this plate we have precisely the colors he mentions, red in the east, and yellow in the north, but green is at the south, and blue at the west.

Sahagun remarks[45] that "at the end of fifty-two years the count came back to *Cetochtliacatl* (one-Rabbit-Cane), which is the figure of the reed dedicated to the east, which they called *Tlapcopcopa* and *Tlavilcopa*, nearly towards the fire or sun."[46]

This language is peculiar and important, and indicates that he had a Mexican painting similar to the plate now under discussion before him, in which the year symbols were at the *corners* instead of at the *sides*. On this supposition only can we understand his use of the term "*Cetochtli-acatl*," and the expression "nearly towards the fire," &c. His use of the term "fire" in this connection undoubtedly indicates red. His language is therefore in entire harmony with what we find on this plate.

According to Gemelli and Chavero the element *earth* was assigned to the south; in this plate, in the right space inclosed by the green loop, we see the great open jaws representing the earth out of which the tree arises. From a careful examination of this figure, so frequently found in this and other Mexican Codices, I am convinced it is used as the symbol of the grave and of the earth. The presence of this symbol and of the figure of death in this space, as also the figures of the gods of death and the under world in the corresponding space of the Cortesian plate,

[44] l. c. See also the colored wheel in Kingsborough, Mex. Antiq., Vol. IV. Copied from one in Boturini's collection, the same as Gemelli's.

[45] l. c.

[46] Y acabados los cincuenta y dos años tornaba la cuenta á cetochtliacatl, que es la caña figura dedicada al oriente que llamaban tlapcopcopa, y tlavilcopa, casihacia la lumbre, ó al sol.

strongly inclined me for a time to believe that this should be considered the north, as in the Aztec superstitions one class of the dead was located in that region; but a more thorough study leads me to the conclusion that these figures are intended to represent the earth and to symbolize the fact that here is to be found the point where the old cycle ends and the new begins. I will refer to this again when I return to the description of the Cortesian plate.

All the authorities, except Boturini, refer the year Tecpatl or Flint to the north, which agrees with the theory I am advancing, and in the lower left-hand corner we find in the red circle the figure of a flint, which according to my arrangement applies to the north, represented by the yellow loop.

How, then, are we to account for the presence of this symbol on the head of the right figure in the red or eastern loop? Veytia says, "They (the Mexicans) gave to fire the first place as the most noble of all (the elements), and symbolized it by the flint." This I acknowledge presents a difficulty that I am unable to account for only on the supposition that this author has misinterpreted his authorities, for no one so far as I can find gives the "sun" or "age of fire" as the first, the only difference in this respect being as to whether the "sun of water" or the "sun of earth" was first. This difference I am inclined to believe (though without a thorough examination of the subject) arises chiefly from a variation of the cardinal point with which they commence the count, those starting at the south commencing with the element earth, those beginning at the east with water.[47] Not that the authors themselves always indicated these points, but that a proper interpretation of the original authorities would have resulted in this conclusion, supposing a proper adjustment of the different calendar systems of the Nahua nations to have been made. I think it quite probable that the artist who painted this plate of the Fejervary Codex believed the first "sun" or "age" should be assigned to the east, and that here the flint indicates origin, first creative power or that out of which the first creation issued, an idea which I believe is consonant with Nahua traditions. I may as well state here as elsewhere that notwithstanding the statement made by Gemelli and others that it was the belief or tradition of the Mexicans that the sun first appeared in the south, I am somewhat skeptical on this point.

Such a tradition might be possible in an extreme northern country, but it is impossible to conceive how it would have originated in a tropical region.

The calendar and religious observances were the great and all-absorbing topics of the Nahua nations, and hence it is to these, and especially the first, that we must look for an explanation of their paintings and

[47] See the various views presented by Chavero, *Anales Mus. Mex.* Tom. II Entrag. 2, and authorities referred to by Bancroft, *Native Races*, II. p. 504, note 3.

sculpture, and not so much to the traditions given by the old Spanish authors.

Finally, the assignment of the year symbols to the four points at which we find them was not, as these early authors supposed, because of their significance, but because in forming the circle of the days they fell at these points. This fact is so apparent from the plates of the Codices that it seems to me to forbid any other conclusion.

In the bottom, blue loop, which we call the west, we see two female figures, one of them with cross-bones on her dress. This agrees precisely with the statement of Sahagun heretofore given, to wit, "for they held the opinion that the dead women, who are goddesses, live in the west, and that the dead men, who are in the house of the sun, guide him from the east with rejoicings every day, until they arrive at midday, and that the defunct women, whom they regard as goddesses and call *Cioapipiltin*, come out from the west to receive him at midday (or south?), and carry him with rejoicing to the west." Before comparing with the plate of the Cortesian Codex, we call attention to some other plates of the Mexican Codices, in order to see how far our interpretation of the plates of the Fejervary Codex will be borne out.

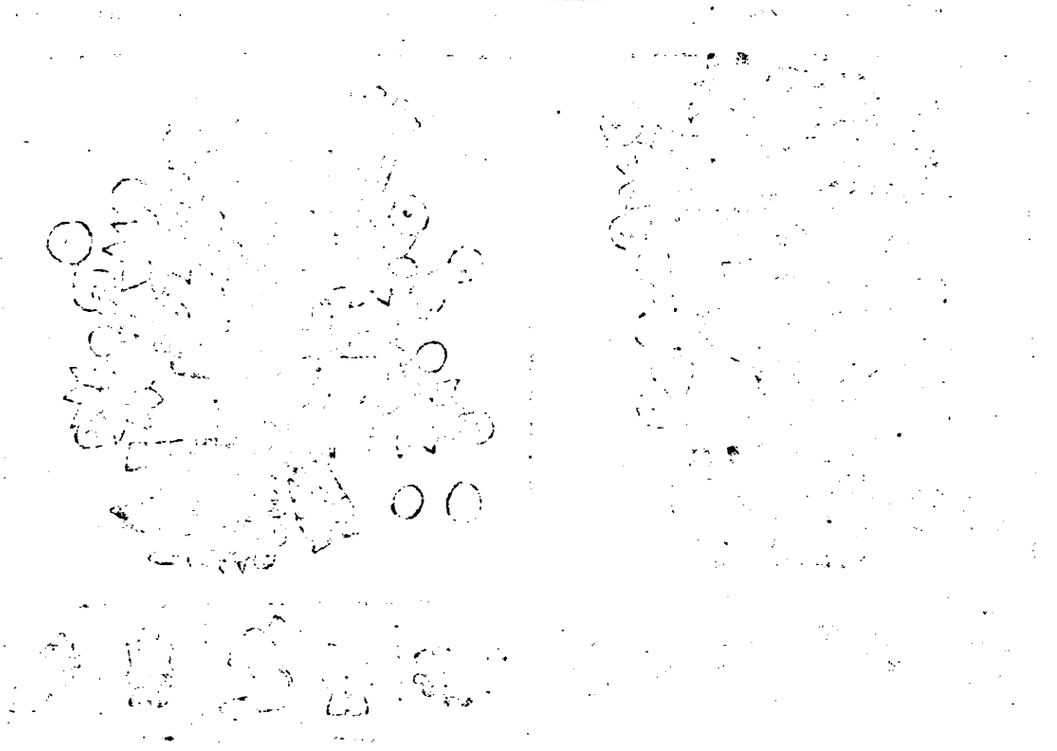
Turning now to Plates 65 and 66 of the Vatican Codex B[48] (shown in our Plate IV), we observe four trees (or crosses) each with an individual clasping the trunk. One of these individuals is red, the other white, with slender red stripes and with the face black, another green, and the other black. On the top of each tree, except the one at the right, is a bird; on the right tree, or rather broad-leaved tropical plant, which is clasped by the black individual, is the figure of the tiger or rabbit. As these are probably intended to represent the seasons (spring, summer, &c.), the ages, or the years, and consequently the cardinal points, let us see with what parts of the plate of the Fejervary Codex they respectively correspond.

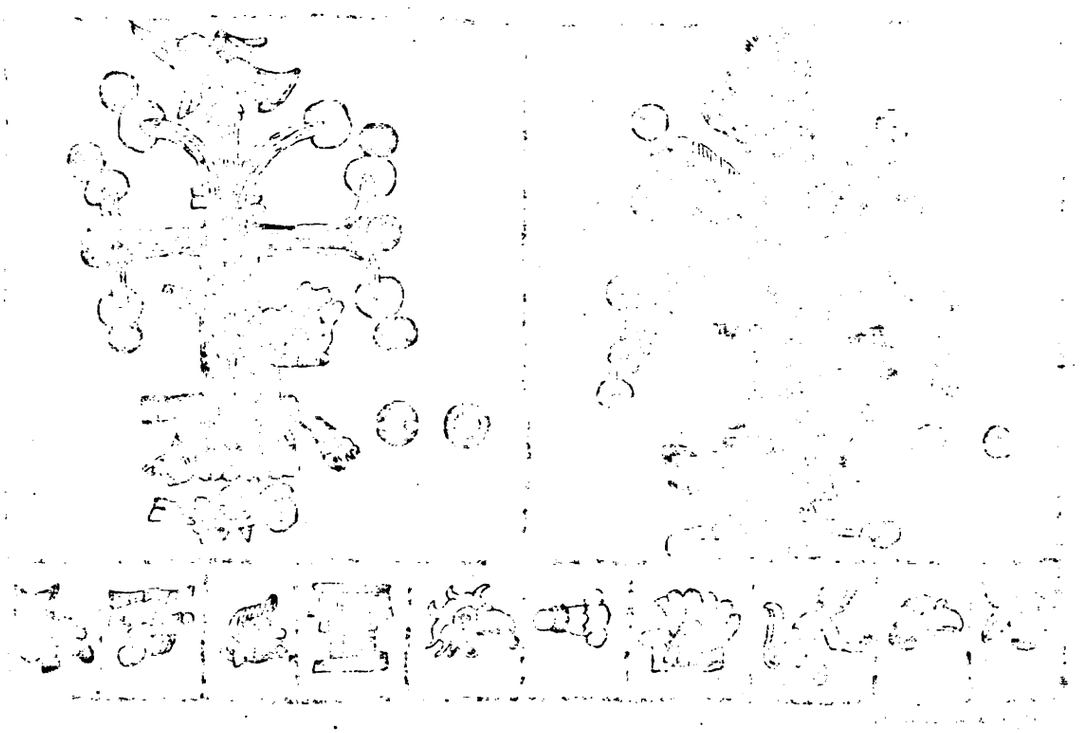
By turning back to page 50 the reader will see that the days of the first column, viz, Cipactli, Coatl, &c., or numbers 1, 5, 9, 13, 17 were referred to the east, the second column 2, 6, 8, 12, 16 to the north, &c. Each of the four trees has below it, in a line, five day characters. Below the fourth one are Xochitl, Malinalli, Cuetzpalin, Cozcaquauhtli, and Tochtli, precisely those of the fourth column, and which, in accordance with our interpretation of the Fejervary Codex, are assigned to the south.

Referring to the first or left-hand of these four groups, we observe that the clasping figure is red, and that the days in the line underneath are 1, 5, 9, 13, 17, those of the east, agreeing in all respects with our interpretation of the Fejervary plate.

The days below the second group, with the white and red striped individual, are 2, 6, 10, 14, 18, indicating the north, and those below the third, with the green individual, 3, 7, 11, 15, 19, denoting the west.

[48] Kingsborough, Mex. Antiq., Vol. III.

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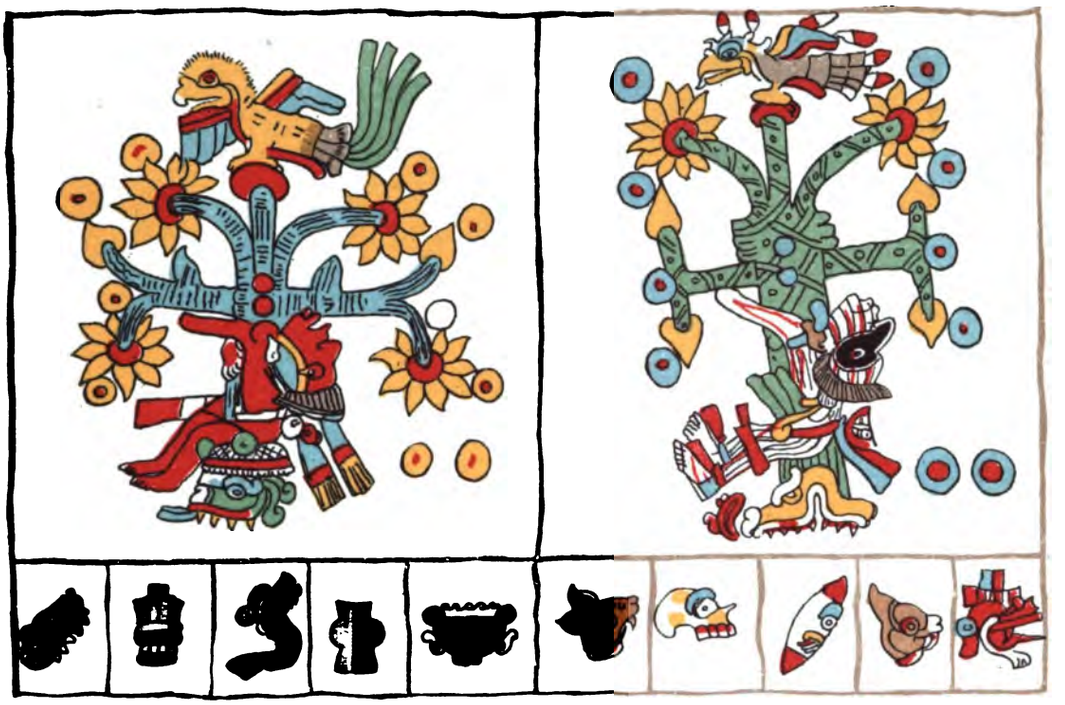
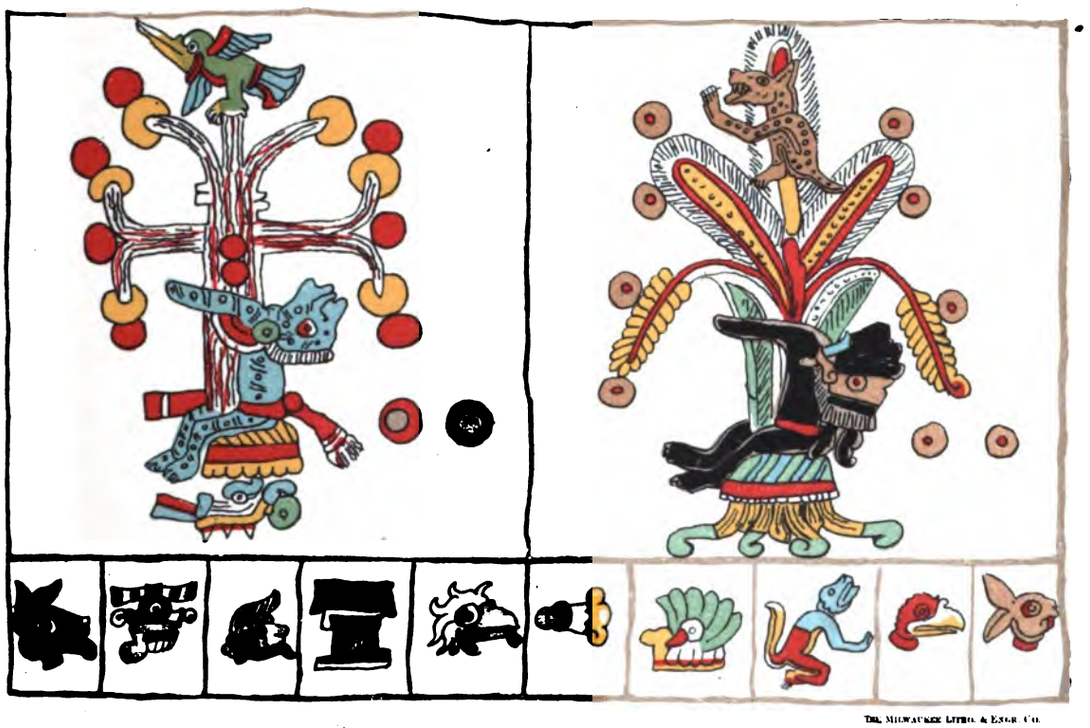


COPY OF PLATE 65, VATICAN CODEX, *B*.



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COPY OF PLATE 66, VATICAN CODEX, *B*

So far the agreement with our theory of the other plate is perfect, but in this case we have taken the figures from the left to the right, this being, as we have seen in the *Tonalamatl*, or table of days, copied from this Codex, the direction in which they are to be read when in a line.

We notice also that the bird over the first tree, although differing in some respects from it, is the same as that in the top or red loop of the other plate, and that over the third tree the same as that in the blue or bottom loop, agreeing also in this respect.

From these facts we understand that the black figure is sometimes at least assigned to the south.

I am fully aware of the difficulties to be met with in attempting to carry out this assignment of colors, in explanation of other plates of this and other Codices, nor do I believe colors can be relied upon. They form some aid in the few plates of general application to the calendar, and where there are reasons, as in the cases given, to suppose the cardinal points will be indicated in some regular order. The same thing is true also in regard to the Manuscript Troano. For example, if we suppose character *a* of Fig. 7 to denote the east, *b* north, *c* west, and *d* south, we shall find them arranged in the following different ways:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *c* | *b* | *a b c d* | *c d a b* | *c* | *a* | | |
| *d* | *a* | | | *d* | *b* | | |
| *a* | *d* | | | *c* | *d* | | |
| *c* | *b* | | | *a* | *b* | | |

Combine with these colors and other distinctive marks, then vary them in proportion, and we should have an endless variety, just as we see in the Mexican Codices. We can only hope to solve the problem, therefore, by selecting, after careful study, those plates which appear to have the symbols arranged in their normal order.

Turning to plate 43 of the Borgian Codex, we find it impossible to make it agree, either with the plate of the Fejervary Codex or the Vatican Codex. Here we find the days 1, 5, 9, 13, 17 associated with the green figure in the lower left-hand square; 2, 6, 10, 14, 18 with the yellow figure in the lower right-hand square; 3, 7, 11, 15, and 19 with the black figure in the upper right-hand square, and 4, 8, 12, 16, 20 with the red figure in the upper left-hand square. What adds to the difficulty is the fact that the symbol of the *Cane* accompanies the black

figure, thus apparently indicating that this denotes the year Acatl. That these groups are to be taken in the same order as those of Plate 44 of the Fejervary Codex, that is around to the left, opposite the sun's course, is evident from the days and also from Plate 9 of this (Borgian) Codex, where the twenty days of the month are placed in a circle.

In this latter the order of the four years is indicated by the first days of the years, viz, *Cipactli*, *Miquiztli*, *Ozomatli*, and *Cozcaquauhtli* placed in blue circles at the corners in the following order:

| | |
|---|---|
| Ozomatli. | Miquiztli. |
| Cozcaquauhtli. | Cipactli. |

In the lower right-hand corner of Plate 4, same Codex, is a square with the four quadrants very distinctly colored and arranged thus:

| | |
|---|---|
| Yellow. | Green. |
| Blue | Red. |

and a large red circle in the center, on the body of what is evidently intended as a symbol of *Cipactli*. As this appears to be a figure of general application, we presume that it commences with *Cipactli*, the day on which the cycles began. As the four names of the days with which the years began probably show, as arranged in the above square, their respective positions in the calendar wheel, I infer that, in their normal arrangement, *Cipactli* corresponded with the red, *Miquiztli* with the green, *Ozomatli* with the yellow, and *Cozcaquauhtli* with the blue. This brings the colors in precise accordance with those on the cross in the lower right-hand square of Plate 43; and if we suppose the black figure to correspond with the blue it brings the colors in the same order, but the day groups are shifted around one point to the left. It is probable therefore that this plate, like a number of others in the same Codex, is intended to denote the relation of colors and day groups to each other in some other than the first or normal year, or possibly to the seasons or the four Indications of the cycle.

But be this as it may, I do not think the difficulty in reconciling the arrangement of the colors and days in this Codex will warrant the rejection of our explanation of the plates of the other codices. That Plate 44 of the Fejervary Codex is one of general application must be admitted, as is also the "Table of the Bacabs" from the Cortesian Codex; and if the true assignment to the cardinal points is made anywhere it will certainly be in these. Turning now to the latter, as shown in our Plate II,

where the erased characters are restored, we note the following facts, and then with some general remarks conclude our paper, as we have no intention of entering upon a general discussion of the Mexican Calendar, which would be necessary if we undertook to explain fully even the plates of the codices we have referred to.

As before remarked, the Cortesian plate is arranged upon the same plan as that of the Fejervary Codex, evidently based upon the same theory and intended for the same purpose. In the latter the four year symbols are placed in the outer looped line at the four corners, and so distinguished as to justify us in believing they mark their respective quadrants. In the former we find the four Maya year-bearers, Cauac, Kan, Muluc, Ix, in corresponding positions, each distinguished by the numeral character for 1 (see 31, 1, 11, and 21 in our scheme, Fig. 2), the first, or the right, corresponding with the green loop and the year Tochtli; the second, at the top, corresponding with the red loop and the year Acatl; the third, at the left, corresponding with the yellow loop and the year Tecpatl, and the fourth, at the bottom, corresponding with the blue loop and the year Calli. This brings Cauac to the south, Kan to the east, Muluc to the north, and Ix to the west, and the correspondence is complete, except as to the colors, which, as we have seen, cannot possibly be brought into harmony. This view is further sustained by the fact that the god of death is found on the right of each plate, not for the purpose of indicating the supposed abode of the dead, but to mark the point at which the cycles close, which is more fully expressed in the Cortesian plate by piercing or dividing the body of a victim with a flint knife[*] marked with the symbol of Ezanab (the last day of the Ix years) and the symbol of Ymix, with which, in some way not yet understood, the counting of the cycles began.

In the quotation already made from Sahagun we find the following statement: "Tecpatl, which is the figure of a flint, was dedicated to *Mictlampa*, nearly towards hell, because they believed that the dead went towards the north. For which reason, in the superstition which represented the dead as covered with mantas (cloths) and their bodies bound, they made them sit with their faces turned toward the north or *Mictlampa*."

Although he is referring to Mexican customs, yet it is worthy of note that in this Cortesian plate there is a sitting mummied figure, bound with cords, in the left space, which, according to my interpretation, is at the north side.

Since the foregoing was written I have received from Dr. D. G. Brin-

[*] Dr. Brinton, "The Maya Chronicles," p. 53, informs us that "the division of the katuns was on the principle of the Beiran system of numeration, as *zel u ca katun*, 'thirty years;' *zel u pez katun*, 'fifty years.' Literally these expressions are, 'dividing the second katun,' 'dividing the third katun,' *zel* meaning to cut in pieces, *to divide as with a knife*." This appears to be the idea intended in the figure of the Cortesian plate.

ton a photo-lithograph of the "wheel of the Ah-cuch-haab" found in the book of Chilan Balam, which he has kindly allowed me to use. This is shown in Fig. 9.

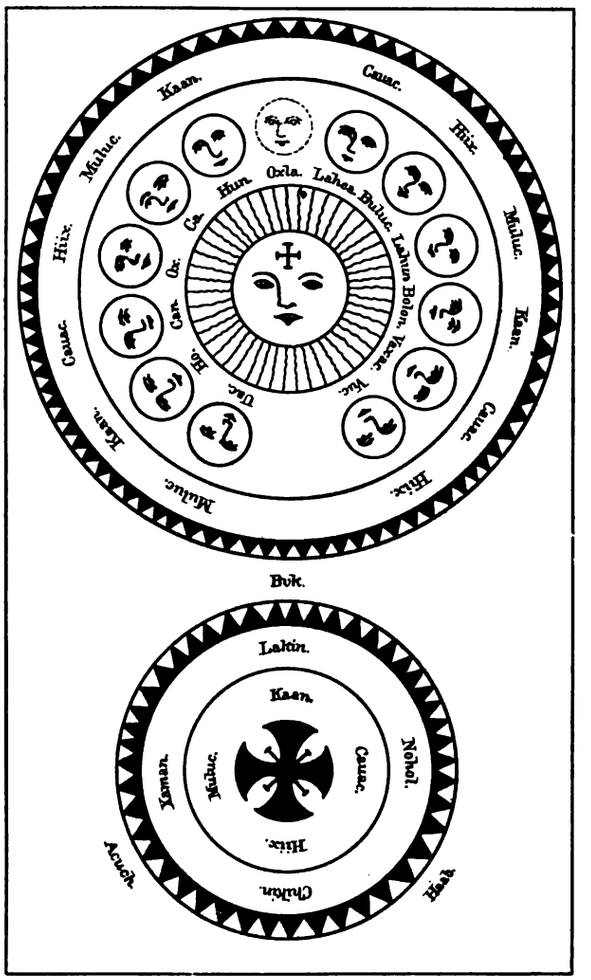


FIG. 9.—Calendar wheel from book of Chilan Balam.

In this (smaller circle) we see that Kan is placed at the top of the cross, denominated *Lakin*, or east; Cauac at the right, *Nohol*, or south; Muluc at the left, *Xaman*, or north; and Hiix at the bottom, *Chikin*, or west.

Although this shows the marks of Spanish or foreign influence, yet it affords corroborative evidence of the correctness of the view advanced. The upper and larger circle is retained only to show that the reading was around to the left, as in the Cortesian plate.

This result of our investigations, I repeat, forces us to the conclusion that *a*, Fig. 7, is the symbol for east, as stated in my former work, *b* of north, *c* of west, and *d* of south.

Among the important results growing out of, and deductions to be drawn from, my discovery in regard to these two plates, I may mention the following:

*First.* That the order in which the groups and characters are to be taken is around to the left, opposite the course of the sun, which tallies with most of the authorities, and in reference to the Maya calendar confirms Perez's statement, heretofore mentioned.

*Second.* That the cross, as has been generally supposed, was used among these nations as a symbol of the cardinal points.

*Third.* It tends to confirm the belief that the bird figures were used to denote the winds. This fact also enables us to give a signification to the birds' heads on the engraved shells found in the mounds of the United States, a full and interesting account of which is given by Mr. Holmes in a paper published in the Second Annual Report of the Bureau of Ethnology.[50] Take for example the three shells figured on Plate LIX—reproduced in our Fig. 10—Nos. 1, 2 and 3. Here is in each case the four-looped circle corresponding with the four loops of the Cortesian and Fejervary plates, also with the looped serpent of the Mexican calendar stone, and the four serpents of Plate 43 of the Borgian Codex. The four bird heads on each shell are pointed toward the left, just as on Plate 44 of the Fejervary Codex, and Plates 65 and 66 of the Vatican Codex B, and doubtless have the same signification in the former as in the latter—the *four winds*, or winds of the four cardinal points. If this supposition be correct, of which there is scarcely room for a doubt, it not only confirms Mr. Holmes's suggestions, but also indicates that the mound builders followed the same custom in this respect as the Nahua nations, and renders it quite probable that there was more or less intercourse between the two peoples, which will enable us to account for the presence in the mounds of certain articles, which otherwise appear as anomalies.

*Fourth.* Another and more important result is the proof it furnishes of an intimate relation of the Maya with the Nahua nations. That all the Central American nations had calendars substantially the same in principle as the Mexican, is well known. This of itself would indicate a common origin not so very remote; but when we see two contiguous or neighboring peoples making use of the same conventional signs of a complicated nature, down even to the most minute details, and those of a character not comprehensible by the commonalty, we have proof at least of a very intimate relation. I cannot attempt in this place to discuss the question of the identity or non-identity of the Maya, Toltec and Aztec nations, nor the relations of one to the other, but follow the usual method, and speak of the three as distinct.

[50] P. 281, pl. 69.

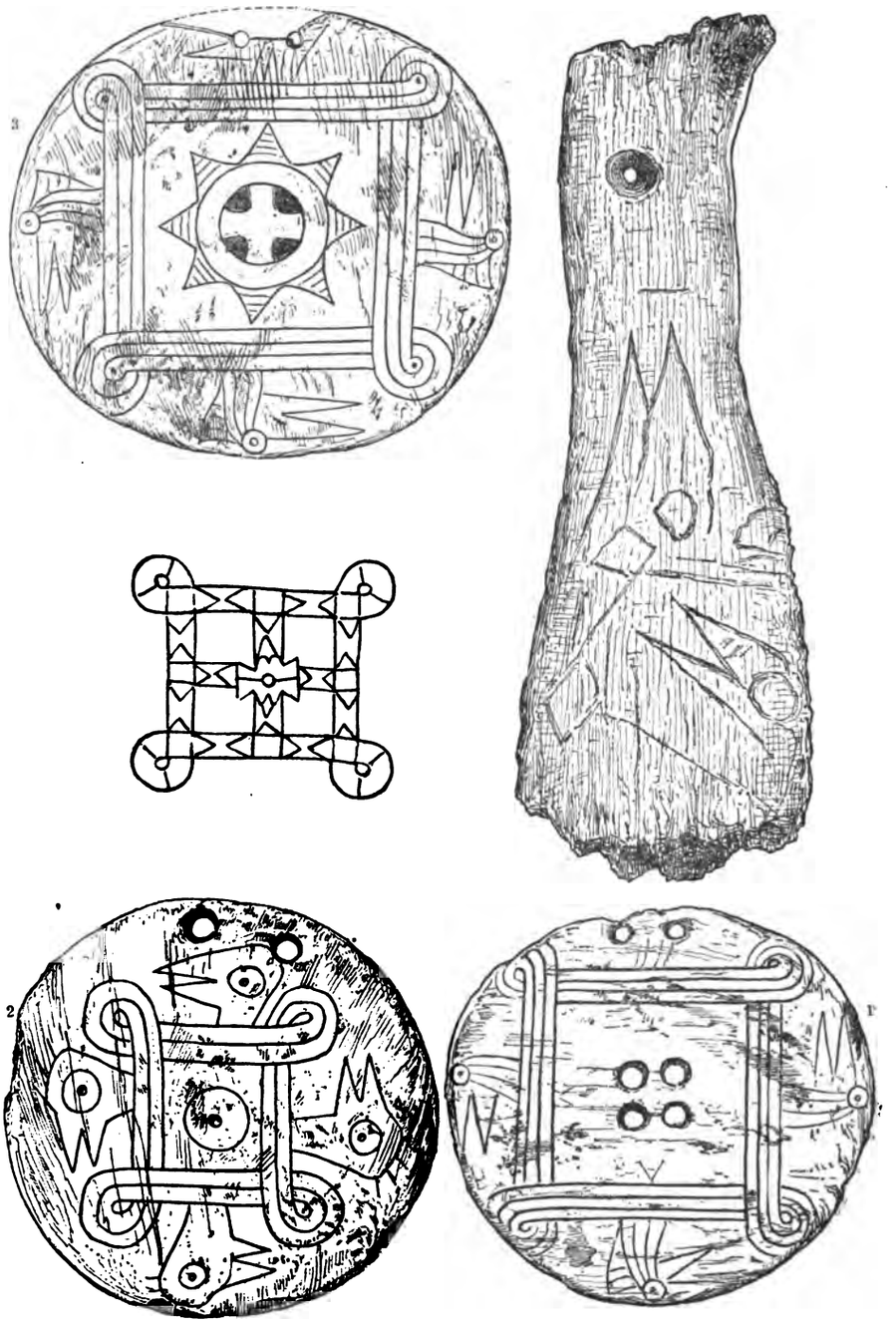

FIG. 10.—Engraved shells from mounds.

If Leon y Gama is correct in his statement,[51] "No todos comenzaban á contar el circlo por un mismo año; los Toltecos lo empezaban desde *Tecpatl*; los de Teotihuacan desde *Calli*; los Mexicanos desde *Tochtli*; y los Tezcocanos desde *Acatl*," and the years began with *Cipactli*, we are probably justified in concluding that the Fejervary Codex is a Tezcucan manuscript.

Be this as it may, we have in these two plates the evidence of an intimate relation between the Maya and Nahua nations, as that of the Cortesian Codex certainly appertains to the former and the Fejervary as certainly to the latter.

Which was the original and which the copy is a question of still greater importance, as its proper determination may have the effect to overturn certain opinions which have been long entertained and generally conceded as correct. If an examination should prove that the Mayas have borrowed from the Nahuas it would result in proving the calendar and sculptures of the former to be much more recent than has been generally supposed.

It must be admitted that the Mexican or Nahua manuscripts have little or nothing in them that could have been borrowed from the Maya manuscripts or inscriptions; hence, if we find in the latter anything belonging to or found in the former it will indicate that they are borrowed and that the Mexican are the older.

In addition to the close resemblance of these two plates, the following facts bearing upon this question are worthy of notice. In the lower part of Plate 52 of the Dresden Codex we see precisely the same figure as that used by the Mexicans as the symbol of *Cipactli*.

The chief character of the hieroglyphic, 15 R. (Rau's scheme), of the Palenque Tablet is a serpent's head (shown correctly only on the stone in the Smithsonian Museum and in Dr. Rau's photograph), and nearly the same as the symbol for the same Mexican day. The method of representing a house in the Maya manuscripts is substantially the same as the Mexican symbol for *Calli* (House). The cross on the Palenque Tablet has so many features in common with those in the blue and red loops of the Fejervary Codex as to induce the belief that they were derived from the same type. We see in that of the Tablet the reptile head as at the base of the cross in the blue loop, the nodes, and probably the bird of that in the red loop, and the two human figures.

What is perhaps still more significant, is the fact that in this plate of the Fejervery Codex, and elsewhere in the same Codex, we see evidences of a transition from pictorial symbols to conventional characters; for example, the yellow heart-shaped symbol in the lower left-hand corner of the Fejervary plate which is there used to denote the day *Ocelotl* (Tiger). On the other hand we find in the manuscript Troano for example, on plate III, one of the symbols used in the *Tonalamatl* of the Vatican Codex *B* and in other Mexican codices to signify water. On Plate XXV* of

[51] Dos Piedras, pt. 1, p. 16.

the same manuscript, under the four symbols of the cardinal points, we see four figures, one a sitting figure similar to the middle one with black head, on the left side of the Cortesian plate; one a spotted dog sitting on what is apparently part of the carapace of a tortoise; one a monkey, and the other a bird with a hooked bill. Is it not possible that we have here an indication of the four days—Dragon, Death, Monkey, Vulture, with which the Mexican years began?

In all the Maya manuscripts we find the custom of using heads as symbols, almost, if not quite, as often as in the Mexican codices. Not only so, but in the former, even in the purely conventional characters, we see evidences of a desire to turn every one possible into the figure of a head, a fact still more apparent in the monumental inscriptions.

Turning to the ruins of Copan as represented by Stephens and others, we find on the altars and elsewhere the same death's-head with huge incisors so common in Mexico, and on the statues the snake-skin so often repeated on those of Mexico. Here we find the *Cipactli* as a huge crocodile head,[52] also the monkey's head used as a hieroglyphic.[53]

The pendant lip or lolling tongue, which ever it be, of the central figure of the Mexican calendar stone is found also in the central figure of the sun tablet of Palenque[54] and a dozen times over in the inscriptions.

The long, elephantine, Tlaloc nose, so often repeated in the Mexican codices, is even more common and more elaborate in the Maya manuscripts and sculptures, and, as we learn from a Ms. paper by Mr. Gustav Eisen, lately received by the Smithsonian Institution, has also been found at Copan.

Many more points or items of agreement might be pointed out, but these will suffice to show that one must have borrowed from the other, for it is impossible that isolated civilizations should have produced such identical results in details even down to conventional figures. Again we ask the question, Which was the borrower? We hesitate to accept what seems to be the legitimate conclusion to be drawn from these facts, as it compels us to take issue with the view almost universally held. One thing is apparent, viz, that the Mexican symbols could never have grown out of the Maya hieroglyphics. That the latter might have grown out of the former is not impossible.

If we accept the theory that there was a Toltec nation preceding the advent of the Aztec, which, when broken up and driven out of Mexico,

[52] Travels in Cent. Amer., vol. I, p. 156. Monument *N*, plate. Mr. Gustav Eisen, in a Ms. lately received by and now in possession of the Smithsonian Institution, also mentions another similar head as found at Copan. This, he says, is on the side of an altar similar to that described by Stephens, except that the top wants the hieroglyphics. The sides have human figures similar to the other; on one of these is the head of an "Alligator."

[53] Ibid., 2d plate to p. 158.

[54] Stephens' Trav. Cent. Amer. III Frontispiece.

proceeded southward, where probably colonies from the main stock had already been planted, we may be able to solve the enigma.

If this people were, as is generally supposed, the leaders in Mexican and Central American civilization, it is possible that the Aztecs, a more savage and barbarous people, borrowed their civilization from the former, and, having less tendency toward development, retained the original symbols and figures of the former, adding only ornamentation and details, but not advancing to any great extent toward a written language.

Some such supposition as this, I believe, is absolutely necessary to explain the facts mentioned. But even this will compel us to admit that the monuments of Yucatan and Copan are of much more recent date than has generally been supposed, and such I am inclined to believe is the fact. At any rate, I think I may fairly claim, without rendering myself chargeable with egotism, that my discovery in regard to the two plates so frequently mentioned will throw some additional light on this vexed question.

NOTE.—Since the foregoing was printed, my attention has been called by Dr. Brinton to the fact that the passage quoted from Sahagun (see pages 41 and 54), as given in Bustamente's edition, from which it was taken, is incorrect in combining *Cetochtli* and *Acatl* into one word, when in fact the first is the end of one sentence and the second the commencement of another. I find, by reference to the passage as given in Kingsborough, the evidence of this erroneous reading. The argument on page 54, so far as based upon this incorrect reading, must fall.

SMITHSONIAN INSTITUTION——BUREAU OF ETHNOLOGY

ON

# MASKS, LABRETS, AND CERTAIN ABORIGINAL CUSTOMS,

WITH

## AN INQUIRY INTO THE BEARING OF THEIR GEOGRAPHICAL DISTRIBUTION.

BY

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# ON MASKS, LABRETS, AND CERTAIN ABORIGINAL CUSTOMS, WITH AN INQUIRY INTO THE BEARING OF THEIR GEOGRAPHICAL DISTRIBUTION.

By W. H. Dall.

## PREFATORY REMARKS.

Some years since, at the suggestion of the Director of the Bureau of Ethnology, I took up the subject of masks, with special relation to those of the Pacific coast of America. Circumstances prevented an immediate prosecution of the work to a close; meanwhile, in 1878, I had the opportunity of examining material bearing on this topic contained in the principal museums of Great Britain and of Northern Europe, except Russia. The study of these collections resulted in a conviction that the subject was one of deeper import, and more widely extended ramifications than I had, up to that time, had any conception of; and that one who had thoroughly mastered it would be possessed of the keys to the greater part of the mystery which locks from us the philosophical religious and social[1] development of uncivilized or savage man.

This conviction led to a disinclination to attempt a superficial treatment of a subject of such importance. Under the circumstances it appeared in the highest degree unlikely that it would be practicable for me to devote to it a study which would be appropriately thorough. Partly through the claims of official duties of a different character, and partly in the hope that some one else would take the subject up with time and opportunity of giving to it the attention it deserves, preparations for publication of the projected article have, until recently, been deferred.

No one coming forward with such a purpose, it has become necessary that the original promise should be, in some part at least, fulfilled; and therefore the present article has been prepared, rather in the hope that it may prove a stimulus to more adequate investigation of the topic, than with any idea that it contains more than suggestions toward directing future researches into suitable channels. It will be avowedly a matter of sketching land-marks and indicating openings to possible harbors, rather than a survey with soundings and sailing directions.

[1] Considered in its public or communal aspect, especially that of public games or amusements.

## THE EVOLUTION OF MASKS.

The word mask, according to Webster, is derived from the Arabic, meaning a thing which excites ridicule or laughter; that this, however, is a comparatively modern conception of the mask idea in the course of the development of culture, will, I think, on consideration appear certain.

1. The ultimate idea of a mask is a shield or protection for the face; probably first held in the hand.

2. The adaptation of it to the form of the face and its support upon the head or shoulders were probably subsequent to the introduction of peep-holes, but must have been nearly or quite coincident with the use of a breathing hole.

3. As a protection, its appearance or ornamentation originally must have been quite secondary in its importance to impenetrability, or mechanical protectiveness.

4. If communities agreed among themselves, and differed from outsiders in the form or appearance of their masks, the characteristics of the mask-form adopted by any group of peculiar ferocity or powers, would begin to have a moral value apart from its capability of arresting or diverting missiles. The terror inspired by the wearers would begin to be associated with their panoply.

5. With the adaptation of the mask to the head and shoulders, a reduction in weight, and consequently of resisting power would be necessary. Its moral value due to its capacity for inspiring terror would constantly tend to increase, as compared with its defensive usefulness.

6. With the realization of this fact, devices to add to the frightfulness would multiply until the mechanical value would be comparatively unimportant. It is to be borne in mind that it is the lowest grades of culture which are in question.

7. With this growth individual variation would come into play; each warrior would bear a more or less personal device. If remarkable for destroying enemies of the tribe, or for the benefits resulting to it from his prowess, death, lapse of time, and traditions, snowball-like accreting as they descended, would tend to the association of superhuman qualities (in form of hero-myth) with him and with his distinctive battle emblem or device. If his device were derived or conventionalized from some predatory, shrewd, or mysterious animal, a mental blending of the ideals of each might be expected, and the seeds sown of a totemic or polytheistic system.

8. With the advance of culture, in its feeble beginnings, humorous

perceptions are well known to be of relatively slow development. However, we can perceive that, with the growth of supernaturalism, the emblem of the hero, already merged in the hero-myth, would, from the first, be associated with any formal recognition by the community of its relations to the supernatural. Thus masks would take their place among religious paraphernalia, not only of the community in its general direct relations to the supernatural, but in the probably earlier form of such relation through an intermediary individual, in the form of a shaman or his logical predecessors in culture.

9. On the other hand, it may be supposed that the exhibition of a device popularly associated with ill-success, cowardice, or incapacity in its owner, while liable in time of war to excite aversion, contempt, or even hostility in the other members of the community, might well provoke in time of peace the milder form of ridicule, closely allied to scorn, which seems in savagery to constitute the sole rudiment of humor; and that, in time, a certain set of devices, originally segregated in some such manner from the generality, might come to be typical of buffoonery, and to be considered as appropriate to public amusements and rollicking communal games.

10. From such beginnings the application of masks to the purposes of secret societies, associations or special classes of the community in their formal relations to the rest, or to outsiders, is easy to imagine, and no attempt need here be made to trace it in detail. The transition to that stage of culture where masks are merely protections against recognition on festive occasions, or the vehicle of practical jokes at the hands of children or uneducated adults, is long, but presents no difficulties. As illustrative of the survival of the earlier stages of the process in a comparatively cultured race to very modern times, the war and other masks, till very lately in vogue among the Chinese, may be alluded to. On the other hand, the theatrical masks of the Japanese belong to a stage of much higher culture both in an æsthetic and moral sense, the idea of terror in connection with them seemingly having quite passed away, their object being to excite amusement or express similitude.

A process in the development of masks which should be noticed is not unfrequently recognizable in the paraphernalia of aboriginal peoples.

The original idea of protection for the face, whose evolution in a particular line has been sketched as above, may develop in another way, which would find a termination in the helmet of the middle ages, the idea of mechanical protection either remaining predominant or at some stage of culture coming in again and rendering the moral effect wholly subordinate. Again, after the mask has developed into a social symbol (as in religious ceremonies or games), the idea of rendering the whole panoply more effective (as by indicating a stature greater than that natural to man), or of making it more convenient for singers or orators, has in some cases resulted in raising the mask proper above the face of the wearer to the upper part of the head-dress, with the consequence of

gradually losing the apertures for sight and the breathing hole, then no longer needed. The mask then becomes a more or less conventionalized model of the face, or even of the whole figure or a group of figures. This stage is recognized in the Moqui masks figured, which have become head-dresses, worn as in the doll, also illustrated; or even with a mask, properly so called, worn over the face beneath in addition. This is also shown in many Tlinkit head-dresses and others of Mexico, Peru, and of the western Innuit.

Still another line of evolution is that in which the ideas symbolized by a mask reach such a stage of identification with it that a wearer, to give life-like motion to the total effigy, is no longer required by the imagination. The mask may then be set up as an independent object of attention. It may be in this case associated with the bodies of the dead as in Peruvian graves, or erected in connection with religious rites; a practice widely spread and not to be confounded with statues or idols which approach the same end by a different path; or finally be attached to the altar or building devoted to such rites. In the last case weight is of no consequence and, in general, durability is of importance, from whence are derived the stone models of faces or stone masks of which Mexico and the Caribbean Islands have afforded such remarkable examples.

Other and less clearly kindred customs are those, prevalent in the same geographical lines (though widely spread elsewhere as well), in which the actual face or head, with more or less of its integuments, is preserved and ornamented. The probabilities are against the direct connection of this practice with the evolution of the artificial mask, but these preparations are frequently termed masks, especially when the back part of the cranium is removed, and therefore deserve notice, as well on that account as because of their partly parallel distribution.

## LABRETIFERY.

In this connection it is worth while to draw attention to the geographical distribution of another practice which is not, like the use of masks, world-wide, but, as far as I am at present informed, appears to be almost entirely peculiar to two totally distinct ethnological regions, *i. e.*, Central Africa, which as being beyond doubt an independent center need not here be further alluded to; and America, especially the western border. I refer to the use of labrets, which for brevity may be called *labretifery*.

The ravages of civilization, as dispensed by freebooters and fanatics, began at so early a period on the shores of Darien and the western coast of South America that the data are most imperfect for the manners and customs of the people in their primitive state. There are many customs of which the vestiges were swept away probably within two generations after the original incursion of the Spaniards, and to which only the most brief and often inaccurate allusions are made in the works of the earliest writers. The proper elucidation of these requires an amount of search and careful study of these ancient sources which it has been impossible for me to give, and the citations here may be taken merely as hints to the ethnologist in search of a speciality which opens an attractive vista for a thorough and not too exuberant investigator. To such I am confident the subject offers ample rewards.

Bulwer, in his quaint "Anthropometamorphosis,"[1] has compiled from many of the earlier writers an account of various methods of self-mutilation for æsthetic or religious purposes affected by various nations; and among others gives several references to the practice of wearing labrets, which I have, in nearly all cases, taken opportunity of verifying from the original authorities. As Bulwer does not cite page or edition, and the works referred to are rarely indexed, this has been a task involving much labor. The result has been to confirm his general accuracy (barring such misprints as Pegu for Peru); hence I feel less hesitation in quoting him in a few cases which I have not had opportunity of verifying.

The labret, among American aborigines, is well known to be a plug, stud, or variously-shaped button, made from various materials, which is inserted at or about the age of puberty[2] through a hole or holes

[1] BULWER, JOHN. Anthropometamorphosis (etc.) 8° (or sm. 4to.), pp. 528, 15 l. unp., *London, W. Hunt*, 1653. Illustrated.

[2] In some cases a small perforation is made at an earlier period, but on the appearance of the signs of puberty it is formally enlarged, and among the northwestern tribes the original operation is usually deferred till that period arrives.

pierced in the thinner portions of the face about the mouth. Usually after the first operation has been performed, and the original slender pin inserted, the latter is replaced from time to time by a larger one, and the perforation thus mechanically stretched, and in course of time permanently enlarged.

They are worn in some tribes by women only, in others by men only, in still others by both sexes, in which case the style of the labret is different for each sex. There are sometimes several small ones forming a sort of fringe about the sides of and below the mouth (in America the upper lip is or was very rarely perforated), as in the Măg'emūt women of the Yukon delta; most generally the perforation is made either just below the corners of the mouth, one on each side (Western Eskimo, males); in the median line below the lower lip, (Tlinkit women; Aleut men of ancient times; Mexicans; Botokudos; Mosquito coast males); both at the sides and in the middle (occasional among the Aleuts when first known and at present by the females among certain tribes of Bering Sea Eskimo); and, lastly, two small ones close to the median line (females among some of the Western Eskimo). It will be noticed that these fashions shade into one another, but that the median single labret, when the practice was in full vogue, was almost always (in adults) much larger than any of those used in lateral positions even when both sorts were employed by the same person.

From this custom several names for tribes have been derived, and passed into ethnological literature, such as Botokudo, from the Portuguese *botoque*, a plug or stopper, and Kaloshian, from the Russian *kalushka*, "a little trough," in allusion to the concave surfaces of the great labrets worn by elderly Tlinkit women in the time when their archipelago was first explored by the Russians.

In most regions which have been brought closely into relations with civilization the practice is extinct or obsolete. The Botokudo and the northwestern Eskimo still use labrets of the original sort; with the Tlinkit only a little silver pin represents in marriageable girls the odious kalushka of the past, while among the Aleuts the practice is extinct, as also, as far as known, it is among the people of the western coast of the Americas from Puget Sound southward.

Other changes are to be noticed antedating the historic period, which is, for the Aleuts, only about a century and a half. Thus, in discussing the evolution of culture as exhibited in the stratified shell heaps of the Aleutian Islands[1] (l. c. pp. 88–89, and plate), I have shown that in the shell heaps belonging to a very remote period, a form of labret was in use among the Innuit of Aliaska Peninsula and at least as far west as Unalashka Island, precisely similar to the Tlinkit kalushka, but which had passed entirely out of use at the time these people were discovered by the expeditions of the Russians and other civilized nations.

[1] Contributions to North American Ethnology, vol. 1. Tribes of the extreme Northwest. 4°. Washington, Government Printing Office, 1877, pp. 41–91.

This is a particularly significant fact, taken into consideration with the geographical distribution of the labret custom, and could it be ascertained that the latter was in the early historic or prehistoric period in vogue among any of the South Sea people, such a discovery would be of the highest interest.

The nearest approximation to it, actually in use among living aborigines of Melanesia, is described in the reports of various voyagers on the practice of piercing the nasal alæ, and inserting the teeth of a pig or some other animal. These will be again referred to. But in Schmeltz's annotated catalogue of the ethnological treasures of the Museum Godeffroy at Hamburg, I find that certain masks from New Ireland show, in one, an S-shaped flat piece of wood inserted, labret-wise, between the mouth and the nose; in two others wooden representations of boar tusks, one on each side, curving upward, with between them a flat perforated wooden carving ending anteriorly in an arrow-shaped point similarly placed between the mouth and the nose like lateral and median labrets; in another there is only the median piece; and in still another there is a tusk only on one side of the upper lip (l. c., p. 23).

Rings are said to be worn in the lower lip as well as in the nasal alæ by girls in some parts of India, but I have not discovered any evidence of this practice in the island peoples of Polynesia.

The geographical distribution of the custom, though interesting, had little significance as long as it was apparently sporadic and, between the regions where it was known to exist, no line of contact could be traced over the vast intervening areas where it was not known. It is but recently, partly from old documents read in the light of presently discovered facts, and partly from the results of recent exploration and collections, that these gaps appear to be very materially diminished, though not wholly bridged. While the reserve imperative upon serious students, in view of the vast flood of inconsequent theorizing in ethnological literature, deters one from claiming more than a chain of suggestive facts for which a tentative hypothetical explanation is submitted for criticism, it would seem as if the chain was of sufficient strength and significance to warrant serious consideration and renewed investigation.

Taken in connection with what may fairly be called the remarkable coincidences of form and fashion between some of the masks hereafter to be described from the Indo-Pacific and from the Northwest American region, manifest is the importance of tracing the labret custom, as begins to seem possible, independent of tribe, language, or race along nearly the whole western line of the Americas, with its easterly overflows, especially in the middle and South American region, and its equally remarkable westerly restriction further north.

Before proceeding to indicate the facts of distribution, it is necessary to consider the nature of the custom and its limitations.

So far as known at present, labretifery is a particularly human and

individual rite. It may have taken its rise in the early custom of submitting the boy at puberty to a trial of his resolution and manly endurance previous to his being admitted to the privileges of a member of the community, including as a chief feature communal rights in intercourse with the unmarried females of the tribe.

Tattooing is primarily a rite of this nature, beside, by its fashion, indelibly indicating the individual's particular commune in which his rights might be exercised.[1] The attainment of these communal rights either by desire of the individual or by the necessity arising from his forced adoption by a member of the commune, whose badge he must therefore be made to wear, is the object and almost the only object of the tattooing to which white waifs in the South Sea Islands have occasionally been subjected or have submitted themselves. Other explanations have been given, chiefly through shame, but that this is the true explanation I am most reliably informed. That it is not always required in these days as a condition precedent to such intercourse is the result of a breaking down of the aboriginal practice by civilization and not necessarily to any primary difference in the form of it.

It is not improbable that circumcision took its rise in a similar way, as up to a very recent date in the Pacific region it was an incident of puberty with many tribes. Infant circumcision would then be a spiritualized version, substituting the adoption into the spiritual communion of the soul, considered as spiritually adult at birth, and therefore an altogether later and idealized rite.

Similar tests for endurance in youth occur among most uncivilized peoples and need not be recapitulated, since every one is familiar with them.[2]

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[1] Speaking of the tattooed lines on the chin used by all the Innuit and many of the West American coast nations from Mexico north, and which he observed at Point Barrow among the Innuit, Simpson states that some undergo the operation earlier than others. In connection with the fact that sexual intercourse is forbidden to boys of this region until they have killed a deer, wolf, or seal, the idea that the operation for labretifery was originally a test of manhood and a passport to the good graces of the girls of the tribe, gains some corroboration from the following extract, which incidentally shows that the same proofs of prowess as a hunter were required before a youth was entitled to have it performed:

"The same irregularity exists with regard to the age at which the lip is perforated for labrets in boys, who, as soon as they take a seal or kill a wolf, are entitled to have the operation performed. But, in truth, no rule obtains in either case; some, led by the force of example, submit to it early, and others delay it from shyness or timidity. A man is met with occasionally without holes for labrets, but a woman without the chin marks we have never seen." (J. Simpson on the Innuit of Point Barrow, l. c., p. 241.) See, also, *apropos* of tattooing, the remarks of Dr. Graeffe in Schmeltz, Ethn. Abth., Mus. Godeffroy, pp. 478, 479.

[2] There seems to be something analogous in the ceremony of incising the ears among the females of the region of New Britain, though this is done before puberty. However, most such customs change, in time, what were originally important features of the rite.

This wide slitting and extension of the ears of women, according to Kubary (cf.

Though perhaps not realized in its full force by anthropologists, and obscured by the degradation resulting from contact with civilization, the separation of the immature youth of the two sexes is a feature originally strongly insisted upon in the social practice of all the Northwest American tribes I have been in intimate contact with, and without doubt of all our aborigines when their culture was in its pristine vigor. The evil results of other causes would be evident to less intelligent observers, and the loss of force it would entail in the community would mean, in the long run, defeat, captivity, and extinction amid the struggle of adjacent communities for a continued existence or the increase of power.

It must, of course, be clearly understood that the rite of piercing, circumcision, or tattooing, as such, was, in most if not all cases, not the sole ceremony or condition upon which full community in tribal privileges was granted. But each or either of them was originally a part if not the whole prerequisite, and was looked forward to by the youth as a key to that door which opened on the field where his aspirations and desires might find untrammeled exercise.

In the first instance, therefore, it was probably restricted to males; vigor and endurance of pain being attributes more necessary to that sex than to the other, in the preservation of the community. As a symbol of maturity and the privilege or obligation of the individual, in connection with communal rights, it might naturally in time be extended to the other sex.

I believe that the idea of ornament in connection with the object worn as a symbol would always follow, though closely, its adoption on other grounds. The idea that it was a symbol of vigor, fortitude, and mature development would connect with the symbol the admiration naturally excited by the qualities it symbolized, which are in the highest esteem in uncivilized peoples; and therefore it would be considered as an ornament without reference to any inherent elegance of form, material, or color. These would afterward be developed, as a matter of course, with the development of æsthetics in other directions, and if this development in other lines did not take place, the original rudeness of the symbol (as in the wooden plug of the Botokudos) would be likely to remain unchanged.

In most cases the communal sexual freedom it typified would remain the fundamental idea up to a pretty high degree of culture. Among the Tlinkit the labret was forbidden to slaves, and sexual intercourse with slaves was considered disgraceful to a free man of the community.

Schmeltz, l. c., p. 551–'2) is a peculiarily Melanesian trait, finding very full expression at the Anchorites Islands of the New Britain group. Among the Mikronesians simple or nearly simple piercing is known, while among the Polynesians the nose is not pierced and the ears not commonly. In the first-mentioned locality a peculiar significance is attached to the operation, which takes place about the age of six years, and males are rigidly excluded from the ceremony; but boring the nose among males is attended with no ceremony, although the practice is general.

As is well known, this race has reached a more than ordinary stage of culture, and promiscuous rights in the unmarried females had become, at the time of their discovery by the whites, to a great extent eliminated from their social code, though in certain contingencies not extinguished. Among their Innuit neighbors it prevailed up to a recent date, and the theory is still held by them, in spite of their partial civilization by the Russian missionaries, though not openly put in practice.

The labret (formerly a slender bone or wooden pin, now generally of silver) among the Tlinkit now means, and has long meant, maturity only, and chastity in young girls is (away from civilized influences) a matter of high importance, to which there is recent testimony of a reliable kind. The marriage of a girl was followed by the substitution of a larger plug, which was gradually enlarged, and typified the power, privileges, and respect enjoyed by the real head of the family. This practice has now gone out of date entirely,[1] owing, no doubt, to the influence of the adverse opinion of the whites upon the younger people of the tribe.

In none of these people does development of culture seem to have arrived at that stage where a religious significance would attach itself to the rite or to the symbol of it. It is for this reason, it may be supposed, that the labret appears only on those masks which were used in social amusements, jollifications, and, so far as I have observed, on none of those used in incantations by the Shamans or those indisputably connected with the exercise of some religious or mystic rite. For the same reason it would be and is absent from those images or carvings having such a connection among the Northern races, and from most of the Mexican stone carvings.

Were the practice coincident with the distribution of certain race-stocks, it would have less significance. It is its occurrence on certain orographic lines, among people of nearly every American linguistic family when located in such vicinity; its absence among kindred branches geographically otherwise distributed, and the geographical relations of the lines along which it is found, which gives it its importance.

Deferring speculations in regard to the origin or cause of this state

[1] In regard to labrets among the Haida women, Dr. George M. Dawson, writing in 1878, states that "Until lately the females among the Haidas all wore labrets in the lower lip. * * Only among the old women can this monstrosity be now found in its original form. Many middle-aged females have a small aperture in the lip, through which a little beaten silver tube of the size of a quill is thrust, projecting from the face about a quarter of an inch. The younger women have not even this remnant of the old custom. The piercing of the lip was the occasion of a ceremony and giving away of property. During the operation the aunt of the child must hold her. The shape of the Haida lip-piece or *stai-eh* was oval. Among the Tsimpsean and Stakhin-kwan (Indians of Port Simpson and Stikine River Tlinkit) it was with the former more elongated and with the latter circular. (Dawson on the Haida Indians, in the Report of Progress for 1878–'79, Dominion Geological Survey, Montreal, 1880, pp. 108, 109 B.)

of things until all the testimony in regard to both labrets and masks has been submitted, it is now in order to indicate the observed traces of labretifery along the eastern border of the Pacific.

Beginning at the southward and eastward, the Botokudos,[1] apparently alone in South America, still retain the practice which less wild and more cultured tribes have discontinued.

The inhabitants of Malhada have the neather lip bored and within the same they carry a piece of thin cane about halfe a finger thick. (Purchas, Pilgrim., iv, lib. vii; Bulwer, l. c., pp. 178–179.)

"The Brasilians have their lips bored wherein they wear stones so big and long that they reach to their breast which makes them show filthy fine" according to Purchas "which another notes is not practiced by the women. They bore holes in their boies under lips wherein they stick sharp bone as white as ivory, which they take out and put in as often as they will, and being older they take away the bones and instead thereof wear great Jasper stones being a kind of bastard emeralds inwardly flat with a thick end because they shall not fall out; when they take out the stones they play with their tongue in the holes which is most ugly to behold for that they seem to have two mouths one over the other." (Linschoten, lib. 2; Bulwer, l. c., p. 180.)

Maginus[2] saith that the Brasilians as a pleasant phantasie, wherein they take singular delight, have from their tender age long stones of no value inserted in their lower lip onely, some in their whole face a cruel sight to behold. The selfsame fashion is in request among the Margajates[3] of Brasil, yet not practiced by the women. (Bulwer, pp. 180–181.)

Of the Brazilians it is said by Purchas (l. c., III, p. 906):

"In their nether lips weare long stones for a gallantry, which being removed they seem in a deformed manner to have a double mouth * * * Vesputius weighed the long stones, which they used to weare in their faces, about sixteen ounces * * * Lerius saith the men weare in their nether lip a Pyramidall stone, which braverie weigheth down their lip, and subjecteth the face to great deformity. Some others also not content with this, adde two others in their cheekes to like purpose." These stones were "great at one end and little at the other; in their infancie it is a bone and after a greene stone, in some as long as ones finger; they will thrust out their tongues at the hole when the stone is removed" (l. c., p. 908).

Peter Carder, one of Drake's company, was captured by these people on the north bank of the Rio de la Plata and afterward escaped. He reported that for each enemy "they kill, so many holes they make in their visage beginning at the nether lip and so proceeding to the cheeke, eye browes and eares." He gives their name as "Tappanbassi." (l. c., p. 909.) Anthony Knivet, of Candishe's company, in 1591 cast on the Bra-

[1] See BIGG-WITHERS, Pioneering in South Brazil, 1878, quoted by FLOWER, Fashion in Deformity, New York, 1882, p. 6.

[2] Compare MAGINI, Geogr. Ptolem. Descr. dell. America, Part II, XXXIIII, p. 207 *bis*, Venetia, 1597. This is the only reference to labrets I have come across in this edition of Maginus, and it refers specifically to the Peruvians and not to the Brazilians. There are many editions, and doubtless a reference to the labret-wearing tribes of Brazil may be found in some of them. For our purposes the quotations from Purchas are quite sufficient.

[3] These are the Botokudos, or at any rate are described as living in the region where the Botokudos now reside.

zilian coast near St. Sebastian, traveled much through the interior. He tells of the "Petivares":

They inhabit from Baya to Rio Grande, their bodies are carved with fine workes; in their lips is a hole made with a roebuck's horne, which at man's estate they cut bigger with a cane, and weare therein a greene stone; otherwise they esteeme a man no Gallant but a Pesant. * * * They travel with great store of Tobacco and have continually a leaf thereof along the mouth between the lip and teeth the rheume running out at the lip-hole. * * * The Maraquites are between Pernambuc and Baya; other Indians call them Tapoyes (or wild men). They have holes in their lips but carve not their bodies. The Topinaques have their dwelling at Saint Vincent's, and wear great stones in their lips. * * * The Pories dwell an hundred miles inland.[1]

"Those canibals who are called Pories have three great holes in their face, one in the under lip and one on either side of the mouth and in every hole stands a fair green stone." (Bulwer, l. c., p. 178.)

"In Peru[2] they make holes in their cheeks in which they put turquoises and emeralds."

In Reiss and Stübel's "Necropolis of Ancon in Peru," Plate 96, fig. 1, represents a face painted on an earthen jar with two disks or circles on the cheeks which recall the Innuit labrets. They may, however, be intended to represent ear ornaments, though much misplaced. I have seen no undoubted labrets from Peru, but specimen tablet No. 17509, collected by J. V. Norton in Peru, contains three small carved articles, of which one has some resemblance to a labret, though very possibly not intended for one.

In Darien[3] "the women wear rings in their eares and noses, with quaint ornaments in their lips."

In Dominica the women have their lips bored as an especial note of bravery. (Purchas, l. c.) The women of Surucusis have chrystall of a skie color hanging at their lips. (Purchas, l. c.)

The "fair green stones," "emeralds," and "bastard emeralds" were, without doubt, in most cases, the green turquois-like mineral called *chalchihuitl* by ethnologists, and which was extensively used for jewels and ornaments from Mexico to Peru by the natives at the time of their discovery.

The natives of the islands off the Mosquito coast of Central America "have a fashion to cut holes in the lips of the boys when they are young, close to their chin, which they keep open with little pegs till they are fourteen or fifteen years old; then they wear beards in them made of turtle or tortoise shell, in the form you see in the margin." The figure represents a flat plate with the form of a balloon upside down, with the pointed end suddenly widened to a stud-like projection, which, extending inside the mouth, prevents the labret from falling out. The author goes on to say: "The little notch at the upper end they put in through the lips, where it remains between the teeth and the lip; the under part hangs down over their chin. This they commonly wear all day, and

[1] PURCHAS, America, Book IX, chap. 4, pp. 909–911, edition of 1626.

[2] MAGINUS, l. c., p. 207 *bis*. LINSCHOTEN, lib. 2. Both quoted by BULWER, l. c., p. 164. I have verified the first reference.

[3] PURCHAS, l. c., book IX, chap. 1, p. 872, edition of 1626.

when they sleep they take it out." (Dampier, voy. 1, p. 32, edition of 1717.) The labret is extremely similar to some of the wooden ones used by the Botokudos.

As regards Mexico the evidence is particularly full and decisive, and yet it seems to have been overlooked almost entirely by late writers in treating of the Botokudos and others, and the obsidian labrets which are not uncommon in collections have seldom been recognized as such.

The following quotations from Purchas give a very clear idea of the elegant labrets worn by the upper classes in Mexico. When discovered the commoner sort do not appear to have attracted much attention:

Among the rest or rather aloofe off from the rest [of the Mexicans met by Cortez at San Juan de Ulloa on his first expedition] were certaine Indians of differing habit, higher than the other and had the gristles of their noses slit, hanging over their mouthes, and rings of jet and amber hanging thereat: their nether lips also bored and in the holes rings of gold and Turkesse-stones which weighed so much that their lips hung over their chinnes leaving their teeth bare. These Indians of this New Cut Cortez caused to come to him and learned that they were of Zempoallan a citie distant thence a dayes journey whom their Lord had sent; * * * being not subject to Mutezuma but onely as they were holden in by force.[1]

There was another idol in Mexico much esteemed which was the God of repentance and of Jubilees and pardons for their sinnes. Hee was called Tezcatlipuca, made of a shining black stone attired after their manner with some Ethnike devices; it had earrings of gold and silver and through the nether lip a small canon of Chrystall halfe a foot long in which they sometimes put an Azure feather, sometimes a greene, so resembling a Turqueis or Emerald. (l. c. p. 870).

Of the six priests who performed the human sacrifices it is said

the name of their chiefe dignitie [who cut out the heart of the victim and offered it to the idol] was Papa and Topilzin; * * * under the lip upon the midst of the beard hee had a peece like unto a small canon of an Azured stone. (l. c. p. 871. See also the Ramirez codex).

In that town which was governed by Quitalbitoi under Muteczuma, king of that province of the West Indies [Mexico] the men bore whatsoever space remaineth between the uppermost part of the nether lip and the roots of the teeth of the nether chap: and as we set pretious stones in Gold to weare upon our fingers, so in the hole of the lips they weare a broad plate within fastened to another on the outside of the lip and the jewell they hang thereat is as great as a silver Caroline dollar and as thick as a man's finger. Peter Martyr (Dec. 4) saith that he doth not remember that he ever saw so filthy and ugly a sight, yet they think nothing more fine and comely under the circle of the Moone (Bulwer, l. c., p. 177–8.)

In the Anthropological Museum of Berlin I saw about a pint of labrets, beautifully polished and neatly rounded, of obsidian of a smoky color, which had been obtained from excavations made in Mexico. They were precisely of the form of the most common sort of Eskimo labret, namely, subcylindrical, wider at the outer end, which was circular, flat, and polished, diminishing slightly toward the base, which is the part which rests within the lip, and a right-angled parallelogram in shape with the corners in many cases more or less rounded off. The base is

[1] PURCHAS Pilgr. vol. v, book viii, chap. 9, p. 859, 4th ed. London, 1626. The image of a Zapotec chief with a very ornate labret in the lower lip, and also several labrets, were found in a tomb in Tehuantepec in 1875, and are figured by Nadaillac in l'Amerique Préhistorique, pp. 369, 370, 1883.

quite thin usually not exceeding 3.0 mm. through and 20.0mm. in length. It is usually concavely arched to fit the curve of the outside of the jaw. Similar labrets from Mexico are in the collection of the United States National Museum, and some years since I saw a photograph of some antique Mexican bas-relief human figures, of which several showed a circular knob projecting from the cheek just below the outer angles of the mouth, such as the Eskimo labrets produce on the face of the wearers.

Sahagun, one of the earliest and best authorities, speaking of the Mexican "lords" and their ornaments, says they

wear a chin ornament, (*barbote*) of chalchiuitl set in gold fixed in the beard. Some of these barbotes are large crystals with blue feathers put in them, which give them the appearance of sapphires. There are many other varieties of precious stones which they use for barbotes. They have their lower lips slit and wear these ornaments in the openings, where they appear as if coming out of the flesh; and they wear in the same way semilunes of gold. The noses of the great lords are also pierced, and in the openings they wear fine turquoises or other precious stones, one on each side.[1] (Hist. de Nueva España, lib. viii, cap. ix.)

The obsidian labrets previously referred to were doubtless worn by the lower classes, to whom chalchihuitl was not permitted. Beside those of the usual "stove-pipe-hat" shape there are some slender T-shaped, with the projecting stem long and taper, much like the bone ones of the Innuit women near Cape Rumiantzoff, which, however, are not straight, but more or less curved or J-shaped. Were these worn by women or were they the initiatory labrets of boys?

Among the Mexican antiquities figured from Du Paix' expeditions is a tom-tom, or hollow cylindrical drum, with one end carved into a human head. In the upper lip two disks appear, one under each nostril. No connection with the nasal septum is indicated, and they much resemble the round flat ends of the hat-shaped obsidian labrets. (Ant. Mex. 2nd Exp., pl. lxiii, fig. 121.) Supplementary plate ix shows an earthen vase, the front of which is a very spirited model of a human figure with open mouth. There is what appears to be a hole in each cheek behind the corner of the mouth as if for a pair of labrets. It came from Palenque.

Between the Mexican region and that occupied by the Tlinkit there is a wide gap over which no bridge has yet been found. The extracts given above have, however, bridged more or less perfectly the much greater gap between Mexico and that portion of the west coast of South America opposite to the region occupied by the Botokudos, and which is also the part nearest approached by any of the Polynesian Islands. Behind this part of the coast are the Bolivian Andes, far less formidable a barrier than those nearer the equator, among which rises the Pilcomayo River, discharging into the Paraguay close to the mouth of the

[1] The inhabitants of New Ireland, near New Guinea, pierce the nostrils, in which they place the small canine teeth of a pig, one on each side (Turner); and the same practice is reported from the adjacent islands and from the southern coast of New Guinea. (Jukes, Voy. H. M. S. Fly, 1, p. 274.)

Parana, whose headwaters come near to draining the Botokudo territory. If the progenitors of these people were wanderers from the Pacific coast the road was ready made for them. At all events, we know that the practice was once widely spread through Brazil, and if it originated on the western coast, once past the barriers of the Andes, there was no reason why it might not have spread all over South America.

Northward from Mexico, beginning with the people of the Columbian Archipelago, and continuing along the coast and islands peopled by the diverse races of Tlinkit, Aleut, Tinneh, and Innuit, there is no interruption of the chain of labretifera until Bering Sea and Strait are reached on the west and the icy desert between the Colville and the Mackenzie on the east.

Utterly unknown in Northeastern Asia, and carried to its highest development only in Middle America by the most cultured American aborigines known to history; spread on a geographical line along two continents; characteristic of the most absolutely diverse American ethnic stocks along that line; unknown in North America among their kindred away from that line; it seems certain that the fashion spread from the south rather than from the north and west. That it was an accidental coincidence of identical inventions, due to a particular stage of progress reached independently by different peoples, it seems to me is simply inconceivable. If so, why did not kindred tribes of these same stocks develop the custom in Middle and Eastern North America?

A few words will formulate what we know about labretifery northward from Puget Sound:

> All the married women (of Port Bucareli) had a large opening in the lower lip, and this opening is filled by a piece of wood cut into an oval, of which the smaller diameter is almost an inch. The older the woman the larger is the ornament, which renders them frightful, above all, the old women, whose lip, deprived of its elasticity and under the weight of this decoration, hangs down in a very disagreeable way. The girls wear only a copper needle which pierces the lip in the spot which the ornament is destined to occupy. (Voyage of Maurelle in the Princesa in 1779; translated in the voyage of La Perouse, vol. 1, pp. 330, 331.)

Among the Sitka Tlinkit, says Lisianski:

> A strange custom prevails respecting the female sex. When the event takes place that implies womanhood, they are obliged to submit to have the lower lip cut and to have a piece of wood, scooped out like a spoon, fixed in the incision. As the young woman grows up the incision is gradually enlarged, by larger pieces of wood being put into it, so that the lip at last projects at least four inches, and extends from side to side to six inches. Though this disfiguring of the face rendered to our eyes the handsomest woman frightful, it is considered here as a mark of the highest dignity, and held in such esteem that the women of consequence strive to bring their lips to as large a size as possible. The piece of wood is so inconveniently placed that the wearer can neither eat nor drink without extreme difficulty, and she is obliged to be constantly on the watch lest it should fall out, which would cover her with confusion. (Lisianski's Voyage. 4°. London, Booth, 1814, pp. 243, 244.)

On p. 255, however, he speaks of a Sitkan child three months old which had the lower lip pierced. The larger plug was inserted at maturity.

At Lituya Bay, in July, 1786, La Perouse observes:

All, without exception, have in the lower lip at the level of the gums a perforation as wide as the mouth, in which they wear a kind of woodon bowl without handles, which rests against the gums, so that the lip stands out like a shelf in front, two or three inches. (Atlas, plates 23 and 24.) The young girls have only a needle in the lower lip; the married women alone have the right to the bowls. We endeavored several times to induce them to remove this ornament, which they did very reluctantly, seeming embarrassed without it. The lower lip falling on the chin presented as disagreeable a spectacle as the first. (Voyage aut. du Monde de La Perouse, vol. ii, pp. 200–202.)

Dixon records the use of the kalushka, or large median labret, at Yakutat, Sitka Sound and Queen Charlotte Islands. He figures a remarkably large one, ornamented on its upper surface with a piece of Haliotis shell, set in a copper rim, and also a woman of the Queen Charlotte Islands, showing how they were worn. They were confined to the fairer sex. (See Dixon's Voyage, pp. 172, 187, and 208. The plates are not numbered.)

The women of the Naas, Haida, and Tlinkit nations when discovered, in general wore labrets; the men did not. The labret, inserted at the first evidences of womanhood, was placed through the lower lip under the nasal septum, and at first was a slender bone or wooden peg, shaped like a small nail or long tack. After marriage the plug was gradually enlarged, and in some very old women was of enormous size. I possess one which measures two and a half inches long by two inches wide, and half an inch thick near the margin. The groove around it is a quarter of an inch deep, and the upper and lower surfaces are made concave to diminish the weight. It is made of black slate, oval and much worn. I have seen one other which was a little larger. They were made generally of wood, of a sort of black shale, or sometimes of white marble or bone. At present a silver pin, manufactured out of coin by the Indians themselves, replaces the bone pin with unmarried girls. The large labret, or kalushka, is entirely out of use, unless with some ancient dame in some very remote settlement. Many of the women from Sitka south have abandoned the practice entirely.

Among the Innuit of Chugach or Prince William Sound the males formerly wore lateral labrets, like those of the Western Eskimo. A dried mummy sent to the National Museum from this bay still showed the apertures in the cheeks distinctly, though they were empty.

Cook gives the following description of the labrets of the Innuit of Prince William Sound and Cook's Inlet, a form which, so far as known, has passed entirely out of use, and of which I am not aware that any specimens are in existence. They were worn by both sexes. He says the under lip was slit parallel with the mouth, the incision being commenced in infancy. In adults it was often two inches long. In it was "inserted a flat, narrow ornament, made chiefly of a solid shell or bone, cut into little narrow pieces like small teeth, almost down to the base or thickest part, which has a small projecting bit at each end, which

supports it when put into" the incision, the dentate edge of the labret then appearing outside. Others have the lower lip "perforated into separate holes, and then the ornament consists of as many distinct shelly studs, whose points are pushed through these holes." The heads of the studs appeared within the lower lip, almost like a supplementary outer row of teeth. He figures the latter kind, in each case four studs. Beads were often hung to the points of these studs. At Cook's Inlet the labrets were exactly like the above described ones from Prince William Sound, but less commonly worn. (See Voyage, vol. ii, pp. 369, 370, pl. 46, 47, 1778.)

In speaking of the women seen in Prince William Sound, Maurelle, in 1779, descibes them as distinguished by pieces of glass or other material which are placed through the lips on each side of the mouth in a manner similar to the median labret of the women at Bucareli (l. c., p. 340).

In regard to the practice of labretifery at Kodiak, it seems to have rapidly diminished after the Russian occupation, since, in 1805, Langsdorff observed (ii, p. 63) that the slit in the under lip was even then rarely seen, while twenty-five years before it was universal.

It has been mentioned above that the inhabitants of Kodiak and the other Aleutian Islands are in the practice of slitting the under lip parallel with the mouth and introducing into the opening ornaments of glass beads, muscle shells, or enamel. The Kaluschian women [of Sitka Sound] carry this idea of ornament much farther. When a girl has attained her thirteenth or fourteenth year a small opening is made directly in the center of the under lip, into which is run at first a thick wire, then a double wooden button or a small cylinder made somewhat thicker at each end. This opening once made is by degrees enlarged, till at length it will contain an oval or elliptic piece of board or sort of small wooden platter, the outward edge of which has a rim to make it hold faster in the opening. The women thus look as if they had large flat wooden spoons growing in the flesh of their under lips.

This ornament, so horrible in its appearance to us Europeans, this truly singular idea of beauty, extends along the northwest coast of America from about the fiftieth to the sixtieth degree of latitude. All the women, without distinction, have it, but the circumference of the piece of board seems to mark the age or rank of the wearer. The usual size is from two to three inches long, about an inch and a half or two inches broad, and at the utmost half an inch thick; but the wives of the chiefs have it much longer and broader. I have even seen ladies of very high rank with this ornament full five inches long and three broad, and Mr. Dwolf, who is very far from being likely to exaggerate, and who is well acquainted with all this part of the coast, from having so often traded hither for sea-otter skins, assured me that at Chatham Strait he had seen an old woman, the wife of a chief, whose lip ornament was so large that by a peculiar motion of her under lip she could almost conceal her whole face with it. (Langsdorff's Travels, vol. ii, p. 114, 1805.)

According to Lisianski:

The people of Kadiak are very fond of ornaments. Both sexes pierce the ears all round and embellish them with beads. The women also wear beads on the neck, arms, and feet. Formerly they wore strings of beads suspended from apertures in the lower lip, or else placed in these apertures small bones resembling a row of artificial teeth, and had besides a bone passed through the gristle of the nose; while the men had a stone or bone four inches long in a cut made in the lower lip (Pl. iii, Fig. d), but these embellishments are now (1805) seldom seen. The fair sex were also fond of tattooing the chin, breasts, and back; but this again is much out of fashion. (Lisianski's Voyage, London, Booth, 1814, p. 195.)

The incisions in the lips and nose were made twenty days after birth, the end of the period of purification of mother and child. (Lisianski, l. c, p. 201.)

The Aleuts, when first known by the whites, wore labrets, both men and women. These are figured by Cook and others, and for the males at least were cleat-shaped, with hanging beads attached in many cases, and the incision was median. Two masks, used in dances, are here reproduced (Plate XXVIII, Figs. 71–72) from the illustrations to Billings's voyage,[1] which show the form of the labret at that time. Cook describes the median labrets of the Aleuts and figures them. (See official edition of his third voyage, ii, p. 417 plates, 48, 49.) They were worn by both sexes. He states, however (p. 509, l. c.), that it was as rare at Unalashka to see a man wearing one as to see a woman without one. It is evident from this remark that the practice of labretifery among these people lay primarily with the women, as among the Tlinkit and other tribes to the south and east. This was in 1778.

In the voyage of Captain Saricheff (with Billings, 1785–'90), published by Schnoor, in St. Petersburg, in 1802, consisting of two volumes, in the Russian language, and a folio atlas of fifty-one plates, he illustrates both masks and labrets. He gives an excellent plate of a Kadiak woman wearing a labret much like that figured here (Plate XXVIII, fig. 71 A), and with a broad, flat strip of bone through the nasal septum. The Kadiak man is represented with two rounded studs inserted side by side through the lower lip under the nose, and a rounded bone like a quill through the nose (vol. ii, p. 38). An Unalashka woman is represented with beads or studs set in the whole rim of the outer ear, two strings with beads on them hanging to the nasal septum, and lastly, with a hole below the outer corner of the mouth on each side, from which projects a labret of a kind I have seen no other record of. These are apparently of bone and resemble a dart-head, but are curved, and with barbs only on one side. In Saricheff's figure they stand out laterally, with the curve convex upward and the notches on the concave side (vol. ii, pp. 16–18). This explains the nature of the objects found in the Kagamil cave and figured by me in Smithsonian Contributions to Knowledge, 318, Plate 10, figs. 17260 *a*, *b*, and *c*, and referred to on page 23 as problematical. The Unalashkan man has no ornaments in nose, ears, or lips, according to Saricheff's figures (vol. ii, p. 16). Another plate showing both sexes full length agrees with the preceding. It is not evident how these labrets were kept in, but they might have been lashed to the ends of a thin strip of whalebone, as the specimens in the Smithsonian collection were arranged to be lashed to something.

Sauer, in his account of Billings' voyage, figures a man and woman of Unalashka wearing the slender, cleat-shaped labret, like that figured by Cook from the same locality (Plate V). He also figures (Plate VI)

[1] An account of a geographical and astronomical expedition, etc., made by Commodore Joseph Billings, 1785–'94, by Martin Sauer, London, 1802.

a man of Kadiak with a broad labret like that described by Cook as seen in Prince William Sound and Cook's Inlet. Langsdorff (vol. ii, pl. ii, fig. 6) figures the cleat-shaped labret of the Aleuts in a clearer manner than any other author:

> At Unalashka a mode of ornament which appears very strange to us Europeans, and which indeed decreases in use among these islanders, is the boring the under lip a little below the mouth, and sticking various objects through the slits so made. A common sort of ornament is made of glass beads, somewhat after the manner of our buckles. (Langsdorff's Travels, vol. ii, pl. ii, fig. 6, p. 39, 1805.)

But an earlier form of which the early voyagers say nothing, and which was doubtless obsolete before their time, is preserved for us in the burial caves and shell heaps. This differs but little from the Tlinkit kalushka in some specimens, but the older ones are more rude and heavy. That the cleat-shaped form was a very late development is evident from the fact that not a single specimen has yet been found after long-continued researches in the Aleutian shell heaps. A tolerably full description of these appeared in the first volume of the Contributions to North American Ethnology,[1] and the figures are reproduced here for clearness' sake (Plates V, VI, figs. 1–4). The Aleutian women seem to have worn labrets like the males.

From the peninsula of Aliaska northward[2] the use of labrets is still common, but in most cases confined to the males. The Innuit man has usually two lateral labrets, of which the most common form is like a "stove-pipe" hat, and made of bone or stone. The brim or ledge of the hat is inside, the crown projecting. Some few of the Tinneh living in proximity to the Innuit have adopted the custom which is unknown among those who have no intercourse with the Innuit. Some of the Innuit women wear small J-shaped labrets, very light and thin, two close together near the middle line of the lower lip, but this is exceptional. Usually the women do not wear them, and the kalushka is entirely unknown among them. The form of those used by the males is far from uniform, except that it is always more or less stud-shaped. Into the projecting part ornaments may be set in, or it may be expanded like an enormous sleeve-button. A favorite ornament is half of a large blue glass head, cemented on to the outside of the stud. A fan-shaped appendage of mottled green and white serpentine is not rarely used. This practice extends northward to Point Barrow,[3] and eastward to

[1] Pp. 87–89, figures 12991, 14933, 16138, and 16139.

[2] Cook describes the natives of Norton Sound in 1778 as wearing the double lateral labrets as at the present day. His language is a little obscure, but there is little doubt that the practice was confined to the males. See official edition of the voyage, ii, p. 483. The people he saw were Innuit.

[3] At Point Barrow the lower lip in early youth is perforated at each side opposite the eye tooth, and a slender piece of ivory, smaller than a crow quill, having one end broad and flat like the head of a nail or tack, to rest against the gum, is inserted from within, to prevent the wound healing up. This is followed by others, successively larger during a period of six months or longer, until the openings are sufficiently dilated to admit the lip ornaments or labrets. As the dilation takes place in the direc-

near the mouth of the Colville River, which falls into the Arctic Ocean. Eastward from that point the practice is entirely unknown to the Innuit, and no labrets have ever been found in the shell heaps of eastern Arctic America. It is equally unknown among the Innuit who have (long since) colonized on the Asiatic side of Bering Strait, and the earliest information we have of these people, from the report of Simeon Deshneff in 1648, describes them as at war with the people who wore labrets. It is true that about 1820 some of the Tsau-chū or Chukchi reported to a Russian navigator the supposed existence of labret-wearing people near Cape Shelagskoi, but this was probably due to a tradition of the travels of some marauding party of American Innuit, who are notorious for their long journeys in their skin canoes.

Practically the labret practice is unknown in Northeastern Asia; it has died out within two generations among the Aleuts and is dying out among the Tlinkit and those Innuit who are brought into intimate contact with the whites. In a comparatively short period it is probable that the practice will be as much forgotten in Northwest America as it is now in Mexico and Peru.

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tion of the fibers of the muscle surrounding the mouth, the incisions appear so very uniform as to lead one to suppose each tribe had a skillful operator for the purpose; this, however, is not the case, neither is there any ceremony attending the operation.

The labrets worn by the men are made of many different kinds of stone, and even of coal, but the largest, most expensive, and most coveted, are each made of a flat circular piece of white stone, an inch and a half in diameter, the front surface of which is flat, and has cemented to it half of a large blue bead. The back surface is also flat, except at the center, where a projection is left to fit the hole in the lip, with a broad expanded end to prevent it falling out and so shaped as to lie in contact with the gum. It is surprising how a man can face a breeze, however light, at 30° or 40° below zero, with pieces of stone in contact with his face, yet it seems from habit the unoccupied openings would be a greater inconvenience than the labrets which fill them. (J. Simpson, on the Western Eskimo, Arctic papers of the Royal Geographical Society, London, 1875, pp. 239–40.)

The Point Barrow natives informed Professor Murdoch, of the Signal Service party lately stationed there, that very long ago, so long that it was only known by tradition, the men wore large median labrets like one which he purchased. But that fashion is now entirely extinct.

## CLASSIFICATION OF MASKS.

From the preliminary remarks it will be realized that the term *mask* is not a specific, but rather a family name, and that the classification of objects so denominated is somewhat complicated.

To begin with, we have three principal types to distinguish, for which it is necessary to coin terms, since there are none in the English (if indeed in any other) language which discriminate between them.

1. The MASK.—An opaque object intended to be worn over the face, and to conceal or defend it, normally with breathing and peep holes.

2. The MASKETTE.—An object resembling a mask, but intended to be worn above or below the face. Normally without perforations.

3. The MASKOID.—An object resembling a mask or face, but not intended to be worn at all. Normally, and almost invariably, imperforate.

*EVOLUTIONARY SERIES.*

Type 1.—MASKS.

A. For defense against physical violence, human or otherwise. Relations individual.
   *a.* Passive.—Characterized by the purpose of offering a mechanical resistance to the opposing force, with or without aesthetic modification. Transitional series from the simplest type to the metallic helmet.
   *b.* Active.—Characterized by the purpose of exerting a moral influence on the agent of the opposing force by exciting terror, either by direct hideousness or by symbolizing superhuman agencies supposed to be friendly to the wearer. Transitional series from the ordinary war mask aesthetically modified, to that of the shaman or of the priest.

B. Symbolical of social agencies, associations, orders, professions, supernaturalism. Relations ordinal or tribal.
   *a.* Illustrative of the connection of the wearer with a particular association, band, order, or profession, having a common relation to the rest of the community.
   *Examples.*—Masks used by the Iroquois "False-faces;" the Zuñi members of the order of the Bow; organizations for public games, dances, or theatricals; the "medicine men" or shamans; ecclesiastics; the Tlinkit clans or totems.
   *b.* Illustrative of special rites, irrespective of the individual acting in ritual.
   *Example.*—Masks used in religious ceremonies not purely ecclesiastical; death masks.

Type 2.—MASKETTES.

A. Symbolical of social agencies, as in subdivision B, sections *a* and *b* of Type 1.

Type 3.—MASKOIDS.

A. Symbolical of relations with the supernatural.
   *a.* Of the individual.
   *b.* Of the community.

All types and forms of masks, except, in some cases, the preserved fragments of actual humanity, will fall into one or another of the preceding sections, which are, however, not divided from one another by sharp lines of demarkation, but rather tend to a gradual transition.

## OF THE PRACTICE OF PRESERVING THE WHOLE OR PART OF THE HUMAN HEAD.

This practice is widely spread, and perhaps among savages more remarkable in the breach than in the observance. It is and has been particularly notorious in regions west (Borneo) and southwest (Australia) of the south central Melanesian region, where this inquiry into the subject of masks may be said to make its starting point. The inhabitants of this archipelago are well known to indulge in it, and such a preparation is figured by Turner in an article[1] on masks, etc., from near New Guinea, and bears a curious resemblance to the celebrated specimen from Mexico figured by Waldeck, Squier, and Brocklehurst. In Blanche Bay, Matupi Island, Captain Strauch[2] reports skulls as painted, supplied with artificial hair, and used in the dance. This is distinctly related to the mask-idea. According to Schmeltz[3] the death mask of the Shaman is placed in his late residence above the place where he was wont to sit, while those of enemies are preserved as trophies.

The Museum Godeffroy possesses seven crania and nine human masks painted and adorned much like those described by Turner and Strauch, and which were obtained in the interior of New Britain at Barawa and Raluana, near Matapu. Schmeltz figures two of them (l. c., t. iii, figs. 3, 4). In one of these the nasal alae are bored and teeth of *Cuscus* inserted. Another mask, exactly imitating those with a part of the skull for a foundation, is wholly made of a kind of putty or paste and came from New Britain. (L. c., p. 435.)

In Hermit Island, north of New Guinea, the dead were formerly burned, the skull, ornamented with flowers, was hung in a tree, the lower jaw reserved as a neck ornament or hung up in the house. (Schmeltz, l. c., p. 458.)

In the New Hebrides, at the island of Mallicollo, the skeletons of the dead are exhumed and the fleshy parts imitated by the application to the bones of vegetable fiber or material, presumably cemented; these pseudo mummies are placed in the sacred houses or temples. A skull so treated is in the Museum Godeffroy. These people also alter the shape of the cranium by pressure in infancy as did some of the people of the western coast of both North and South America. (Peru, Mexico, Oregon, British Columbia.)

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[1] Journal of Anat. and Physiol. xiv, p. 475 *et seq.*, plate xxx, 1880.

[2] Schädel masken von Neu.Britannien, Zeitschr. f. Ethn. xii, 1880, p. 404, pl. xvii.

[3] Cf. Ethn. abth. Mus. Godeffroy, Hamburg, 1881, p. 20, t. v, f. 1; p. 435, 2, 1; p. 487, t. xxiii, xxxv.

In the Marquesas skulls were preserved and ornamented, the eyes replaced by pieces of pearl shell, and the lower jaw fastened to the upper by cords. According to Schmeltz (l. c., p. 242) the Marquesans used various methods of preserving the dead, who were frequently embalmed and preserved for a long time, or laid in caves or in trees. A little house, high in the mountains or among the pinnacles of the rocky coast, was used as a mausoleum. Here, until the flesh had disappeared from the bones, were useful articles, food, and drink brought for the use of the dead from time to time. Finally the skull is brought to one of the sacred "taboo" places and secretly deposited there. This duty was performed by one of the children of the dead, who, as well as others who know of the act, does not speak of it to any one. The skull is the only part which is regarded as holy; the remainder of the skeleton is destroyed.

This recalls the observations of early writers among the Tlinkit, who burned or destroyed the body and skeleton of the dead, and placed the preserved head or skull in a little separate ornamented box near by or upon the chest containing the ashes of the remainder of the frame.

The point on the western coast of South America nearest to the Polynesian Islands, as before pointed out when speaking of labretifery, is in the region of Bolivia. Here we find the remarkable heads, from which the bone has been extracted with its contents, and the remainder, by a long course of preparation, finally reduced to a dwarfish miniature of humanity, supposed to be endowed with marvelous properties.[1]

A similar practice is reported from Brazil by Blumenbach, in the last century.[2] The preserved heads from New Zealand are in most ethnographic museums.

How far the use or application of these remains may vary, or have varied, among the different races who prepared them, there are no means of knowing. The variations developed during an indefinitely long period must be supposed to be great, however uniform the incipient practice. Thus, in Borneo the Dyak head hunter seeks trophies of valor in his ghastly preparations, whatever associations they may also have with the supernatural. The Australian widow carries for years her badge of former servitude and present misery in the shape of her husband's prepared cranium. These ideas are quite different from those of the people we are considering, with whom the prepared remains have a direct connection with their idolatry or fetichism, and were, both in the Archipelago and in America, placed on or by the idols at certain periods or continuously. But the bare fact of any use or value being connected with such relics among certain peoples, while to others the corpse and all its belongings become objects of terror and

[1] See also J. Barnard Davis, Thesaurus Craniorum, p. 249. This practice has also been reported from the Amazon region.

[2] Blumenbach, Decas Craniorum, Gottingen, 1790; cf. pl. xlvii.

aversion, or unclean, has evidently, in connection with other ethnic facts, a certain bearing or weight.

The most remarkable and interesting instance of this practice known to anthropologists is that of the human mask now in the Christy collection, forming part of the British Museum. This is believed to have been brought to Spain shortly after the Spanish conquest and formed part of several collections, being at last secured by Mr. Henry Christy.

In this specimen the eyeballs are replaced by polished hemispheres of pyrites; the nasal septum masked by pieces of shell, and a mosaic of small bits of dark obsidian and green turquoise or chalchihuitl, inlaid in broad bands across the face. The part of the skull behind the ears is cut away, so as to admit of placing this human mask over the face of an idol, where it was fastened by leather thongs, which still remain attached to it. It was elegantly figured in colors by Waldeck in Brasseur de Bourbourg's Monuments Anciens du Mexique, plate 43, p. viii.[1] It was then in the Hertz collection.

The following account of its use is given by Sahagun,[2] as quoted by Bourbourg:

> Au mois Izcalli on fabriquant un mannequin du Dieu du feu Xiuhteuctli * * * on lui mettait un masque en mosaïque tout travaillé du turquoises avec quelques bandes de pierres verte appeleé chalchuihuitl traversant la visage; ce masque était fort beau et resplendissant.

This mask, therefore, belonged to the third type, and might properly be classed near the stone maskoids, of which Mexico has produced so many.[3] (Cf. Ant. Mex., 1st exp. Du Paix, pl. xv, f. 16.)

Further north I have come upon no distinct record of such a practice,[4] though Meares and some others represent Callicum and Maquinna, chiefs, at Nutka and vicinity, as preserving the skulls of their enemies, while

[1] It is also represented by a cut derived from Waldeck by Squier in his article on chalchihuitls from Mexico and Central America, Ann. Lyc. Nat. Hist., N. Y., 1869; and in colors by Brocklehurst in his recent work on Mexico.

[2] Hist. Gen. de la Cosas de Nueva España, ii, chap. xxxvii.

[3] The Museum Godeffroy has received from New Britain a mask so small and of such a character that Schmeltz supposes it to have been intended to be placed over the face of one of their idols (l. c., p. 488).

[4] In 1787 Dixon observed that the Tlinkit of Yakutat Bay in disposing of the dead separated the heads from the bodies, preserving the bodies in a sort of chest above ground (as do the Northern Innuit on the Yukon River at the present day), with a frame of poles over it. The head was separately preserved in a carved and ornamented box painted in various colors and placed on the framework about the chest. In Norfolk Sound, now known as Sitka Sound, one of his party observing a cave in the hillside, entered it and found one of these boxes containing a head which seemed to have been newly placed there. Nothing is said of any body or chest as being in the cave. (See Dixon's Voyage around the World, London, 1789, pp. 175, 181.)

Among the Tlinkit of Sitka, according to Lisianski, in 1805, bodies of the dead were burned, but of bodies of those who fell in war the head was preserved and placed in a separate wooden box from that in which the ashes and bones were placed. (Lisianski, l. c., p. 241.)

the manuscript voyage of the Eliza, Captain Rowan, to the Northwest coast in 1799 determines definitely, not only that the blood-thirsty savages of Queen Charlotte Islands and the adjacent mainland decapitated and scalped their victims, but that these trophies were very highly valued among themselves and sold for extraordinary prices, judged by either Indian or civilized standards. Thus Captain Rowan endeavored to recover the scalps of several whites murdered by the Queen Charlotte Islanders, and found they had been sold to a Nuus chief for sea-otter skins to the value of several thousand dollars. So far as is known, the native tribes bordering on these, northward and eastward, knew nothing of such practices, and never adopted this particular barbarity. Nor are masks in use among them (excluding the coast tribes), except where they have been visibly adopted in rare instances of imitation.

I have not had time to investigate the relations to this practice of the tribes of the Antilles, and indeed have been able to hardly more than touch upon the more salient features of the whole topic.

## OF THE DISTRIBUTION OF MASKS WITH RELIGIOUS AND SOCIAL RITES AND EXERCISES ASSOCIATED WITH THEM, GEOGRAPHICALLY CONSIDERED.

It is quite certain that in early stages of culture social festivals and religious or superstitious rights were separated by no distinct line, and probable that the social ones grew out of those which were, to a considerable extent, if not wholly, of a religious character. However, among the aborigines of the Northwest coast, at the time of their discovery the distinction between the games or semi-theatrical performances, illustrative of tribal myths, legends, and traditions, and those of a religious nature performed by or under the direction of a shaman or priest, had become quite well marked. Our knowledge of the myths and religious beliefs or superstitions of the vicious and extremely savage islanders of the Archipelago north of New Guinea is extremely imperfect, and for many of them altogether wanting. Hence it is impossible for the most part to formulate a comparison between their ideas and those entertained by the people of West America. For the latter, even, we have but little authentic information, much of which is derived from persons ignorant of the fundamentals of ethnography, and whose assumptions, made in good faith from the facts before them, may often incorporate unintentional error. Turn in what direction we may, on every hand are gaps in the evidence, miscomprehensions of savage philosophy, and a tantalizing incompleteness of material. Our best endeavors are but groping in the twilight.

In this condition of things it only remains for us to bring together by regions such evidence as we may, trusting to time and further research to bridge the chasms.

For the present purpose, the geographical order adopted is as follows:

1. North Papuan Archipelago.
2. Peru.
3. Central America and Mexico.
4. New Mexico and Arizona.
5. The region occupied by Indians from Oregon to the northern limit of the Tlinkit.
6. The Aleutian Islands.
7. The Innuit region from Prince William Sound to Point Barrow.

### MASKS OF THE SOUTH SEAS.

*The Papuan Archipelago.*—One of the earliest papers on the masks of this region is that of Captain Strauch, of the German navy, in the Zeit-

schrift für Ethnologie.[1] He figures a number of masks and masksttes, beside other articles. He notes that the larger ones are figures of a religious nature and the smaller ones festive. Several of the latter are notable for distortion of the mouth with the view of making them more ludicrous or terrifying. Those figured by him were collected by the *Gazelle* at the islands known as New Hannover. Some of them show apertures for earrings. D'Urville notes in the voyage of the *Astrolabe*[2] that the people of New Holland pierce the alæ of the nose in one or two places, in which they insert the small canine teeth of a pig. A mask from this vicinity shows these.

The following masks are figured by Schmeltz in Der ethnographisch-anthropologische Abtheilung des Museum Godeffroy in Hamburg (8°, 692 pp., 46 pl., 1 map; Hamburg, Friederichsen & Co., 1881); t. fig. 1, pp. 436, mask from New Hannover; t. iii, figs. 3, 4, pp. 20, 434, masks of human skulls from New Britannia; t. v, fig. 1, p. 20, mask from New Ireland; t. x, fig. 6, p. 70, small dance-ornament in imitation of a face and arms, provided with a finger stall, recalling the finger masks of the Innuit of the Kuskokwim River, Alaska; t. xxii, fig. 4, p. 120, mask from Lunuar Island, New Hebrides; t. xxix, fig. 1, p. 301, mask from Mortlock Islands; t. xxxi, fig. 1, p. 439, maskette from New Ireland?; t. xxxiii, figs. 1, 2, 3, p. 487, masks from NewIreland; t. xxxiv, fig. 1, p. 487, mask from New Ireland. From this valuable work of Schmeltz, based upon the finest existing museum of South Sea ethnology, I have extracted the following notes on masks, dances, and related customs of the Melanesian peoples:

In the New Hebrides group of islands masks are used in dances which the women are prohibited from seeing. They are built up on a foundation of cocoanut shell, colored with red, black, and white; the mouth and nose are large; a boar-tusk perforates the flesh on each side of the mouth, the points turned up to the forehead; they are called "Nalue;" one in the Museum Godeffroy came from Lunuar Island, near the south coast of Mallicolo. A hat-shaped head ornament is used in this region during a feast which takes place at the time of the Yam harvest, similar to the Duk-Duk hat of New Britain. For some of these hats Schmeltz believes European models have served, one being much in the shape of a "cocked hat" formerly used in European navies, others like fool-caps, and still another like a very old-fashioned female's hat. These resemblances, however, may be derived from the very nature of the article, as some of the helmet-masks greatly resemble the ancient Greek helmet in form, and not due to imitation.

In one mask from New Ireland a flat carving pierced or carved at angles projects from the mouth, with an arrow piercing a fish upon it, which Schmeltz states resembles a carving which the natives are accustomed to hold in the mouth while dancing (l. c., p. 21). A Japan

[1] Vol. viii, 1876, p. 82 et seq.; cf. also xvii.

[2] Vol. i, pl. 10; vol. v, p. 238, cf.; also Duperrey's Voy. Hy. i, p. 244.

others from the same locality show, in one, an S-shaped flat piece of wood inserted labretwise *between the mouth and the nose;* in two others wooden boar-tusks, one on each side, with, between them, a flat perforated wooden-carving ending anteriorly in an arrow-point, similarly placed between the mouth and nose, like lateral and mebian ladrets; in another there is only the median piece; and in still another there is a tusk only on one side of the upper lip; (l. c., p. 23). Some of these masks were intended to be held on by a mouth-bar between the teeth, placed on the inside behind the mask-mouth as on the northwest coast of America. Maskettes or carvings for the head-dress similar in many respects to the masks are also characteristic features of the paraphernalia of the dance in New Ireland and New Britain; (l. c., p. 32, 3.)

Hubner describes part of the Duk-Duk ceremony, as it is practiced in New Britain, as follows:

If any of the chief's family are ill, a Duk-Duk will probably be performed, since only these rich people can afford such a luxury. This ceremony lasts about a week, and the natives say that when a sick man sees a Duk-Duk he either gets well or soon dies. This ceremony or religious performance takes place in a tabooed inclosure where women and children may not go on pain of death. One or more men are entirely covered with leaves, excepting only their legs, which are bare and visible, and their heads, upon which a Duk-Duk mask is placed, usually made of bast from the wild cherry tree.

In this array the wearer now runs through the island, begging from everybody; even the whites are expected to give tobacco or shell-money. Women and children, under the severe penalties which follow their seeing the Duk-Duk messenger, must hide themselves during this time; above all they must not say that this garb conceals a fellow-countryman, but Turangen, one of their deities. Probably the performer will first take a canoe to another island and thence come back and make his first appearance coming out of the water. If the mask comes off the performer's head or falls so that the sharp point at the top sticks in the ground, he will be killed.

I learned from one of the chiefs that the dress of the Duk-Duk is composed entirely of single chaplets of leaves, the undermost, attached to two strings passing under the shoulders, hangs directly over the hips. More and more of the chaplets are put on until the man is covered to the neck, when the Duk-Duk hat is put on his head.

During this solemnity those present indulge in a sort of mock fight, screaming and roaring; the young people run to one of the elder persons and perhaps after three applications, each presents his back to the old man, who strikes it with a stout club, upon which the beaten person cries *Boro* (*i. e.*, pig), and runs away. This agrees with the custom that the "Tambu" people who are entitled to enter into the ceremony may not eat pork. Upon their connection with the Duk-Duk ceremonial, I can say nothing further, because the people who are not "Tambu" know nothing, and those who are will say nothing about it. If any one will become "Tambu" he must remain in a sitting posture in a house in the first Tambu inclosure for a month, silents, and without seeing any woman. However, he is well fed and naturally gets fat. This done, he must then perform a dance. He can then be seen of women and is "Tambu." He must, however, abstain forever from pork and the flesh of sea animals, otherwise, as is universally believed, he will die. (Schmeltz, l. c., pp. 17–19, plate iii, fig. 1.)

Compare with this performance Swan's account of the Tsiahk dance or ceremony for the sick among the Indians of Cape Flattery (l. c., pp. 73–4) and with Schmeltz's figure of the Duk-Duk performance Swan's figure of a female performer in the Tsiahk dance. The fact that

one of the medicine dances of the Cape Flattery Indians is called Duk-wally is of course a mere accidental coincidence to which no importance should be attributed.

The hat-shaped mask of the Duk-Duk ceremony is surrounded with tresses of bast which conceal the face and are colored red below; the body of it is conical, with a long stick extending vertically from its apex. The lower part of this is painted red, with triangular figures on two sides; the upper part is more or less covered with bast, and has a bunch of leaves at the point. These leaves and those of the dress are from the Pandanus tree. A similar hat is placed on their idols, according to Captain Brück, in New Britain, and recalls the curious conical hat with a succession of small cylinders rising from its apex one above another carved on some of the old T'linkit and Haida totem posts, but which no one has reported as actually worn, if, indeed, they exist anywhere except on the totem posts and in museums. A club or staff is held in the hand in both the Indian and Melanesian ceremonies.

The following notes are from specimens actually examined:

20651 (Plate IX, figs. 9–10).—This mask was obtained by H. S. Kirby near Levuka, Friendly Islands. It is composed of a wood resembling spruce, of which the unpainted surface forms the groundwork of the coloration. The interior is slightly concave, with a small stick to be held in the teeth. The front is rather flattish. There are two rounded ears over the forehead which, with the peculiarly formed mouth, indicate that some sort of animal with a pointed muzzle and upright rounded ears was intended to be symbolized. The chin, mouth, nose, lower edge of eyebrows, and a band around the edge of the ears are colored red. The other markings indicated by the figure are black. There is a white band round the mouth which also served as an eye-hole. In front of the ears and around the upper edge of the mask are peg-holes, by pegs in which hair, feathers, or fiber was probably once fastened. There are traces of gray downy feathers which had been pegged on each side of the chin. There had been an operculum or something of the sort, once, to serve as pupil for each of the eyes of the mask which are not perforated. There is a knob with a hole in it carved at the top of the mask, probably for the purpose of putting a cord into by which the article might be suspended. In the record-book no history is attached to this mask, other than the details mentioned. The figure is one-fifth the linear size of the original.

Plate VII, figs. 5–6. This is a wooden maskoid from Mortlock or Young William's Island, Caroline group, South Seas. The original is deposited in the American Museum of Natural History, Central Park, New York City. I am indebted to the director, Prof. Albert S. Bickmore, for the privilege of figuring it. It strongly resembles some Innuit masks in general appearance. Its dimensions are 28⅓ by 16⅓ inches, and from front to back it is about 8 inches in greatest depth. The disk is shield-shaped, and about 3 inches in greatest thickness.

The face is colored white with a sort of lime-wash, which has scaled off in spots. The margin is black, with radiating white lines nearly effaced. There is a faded band of red on the border and under the brows. The eyes are indicated by mere grooves, nearly closed. Touches of white in the mouth indicate teeth. A rounded lump of wood is attached at one of the upper corners, which has been much bored by ants or boring crustacea. The wood seems to have been drift-wood. At the back is a roughly-hewn keel through a hole in which passes a cord of vegetable fiber by which it was tied to a wall or post. There is a small wooden projection behind the right upper margin, which is pierced with a hole. Use and history unknown.

From the Mortlock Islands of the Caroline group the Museum Godeffroy has several masks or maskettes very similar to the one here figured from the museum in New York. They are used in the dance, and are called by the natives "To-pā′ nu." There is only one wooden knob above, as in the figured specimen.

Plate VIII, fig. 7; Plate IX, fig. 8. This is a wooden maskette or helmet recalling some of the Tlinkit dancing masks, and was probably put to a similar use. It is said to have come from New Ireland, near New Guinea. It is one of a collection deposited in the American Museum of Natural History, New York City, with the preceding, and figured with the kind permission of Professor Bickmore. The wood is that known as "burau" in the South Seas; the hair is of vegetable fiber of the natural (dark) grayish color. The base coloration is dull red, with white tracery in a sort of thick lime-wash. The pupils of the eyes are formed of the calcareous opercula of *Turbo petholatus* Linné, exactly in the way in which the opercula of *Pachypoma gibberosum* are used on the northwest coast of America.

From the lower part of the front edge to the top of head is 10½ inches. The total width, exclusive of the hair, is about 8 inches; the spike on top of the head is 5½ inches; and from the back to the front edge is about 15 inches. The lower part of the face is not represented. History and exact uses unknown.

Plate X, figs. 11–12. This is a maskoid carving similar to some which have been considered by Schmeltz to be idols, or ornaments for boats intended to be set into a post or socket. It is stated to have come from New Ireland, and belongs to the same series as the two preceding specimens. From the base on which the figure stands to the top of the appendages over the head is about 2 feet, the diameter is about 6 inches. It is of "burau" wood, with a fringe of cocoa fiber, eye pupils of the *Turbo* operculum, colors dull red, black, and chalky white. The head somewhat resembles the maskette just described; except that fiber used for hair is of the cocoa husk. The two appendages over the head may be supposed analogous to the lump of wood on the first-mentioned specimen from Mortlock.

This specimen is figured as the best accessible Melanesian example of

the peculiar attitude and combination seen in some Mexican terra-cottas and in many maskettes, maskoids, and rattles from the Indians of the northwest coast of America.[1] That is to say, the mouth is open, the tongue protruding and continuous, with the tongue of an animal (in this case a snake) which is held in the hands of the main figure and hangs down between the knees. In one specimen in the same collection the serpent is continuous with or attached to the male organ of the sustaining figure, which would indicate an idea, or association of the idea, of life and transmission of spiritual influence or life similar to that entertained by the natives of the northwest coast of America.

In the present instance, the figure is represented as without legs, unless the stick-like supports for the hands be considered as recurved conventionalized limbs. The mouth is open, the tongue protruding and its tip held in the mouth of a doubled-headed serpent, whose opposite head hangs down near the base, also with the tongue visible. The upper head has the triangular form belonging to poisonous serpents. The lower head is narrower and more cylindrical. Just behind the latter, from its neck, two leaves or palm branches start out, and, rising in the form of a lyre, their tips are attached, one on each side, behind the under lip of the principal figure. About midway these branches are held by the hands of the latter, each of which is also supported by a straight stick rising from the base. Each elbow is supported in the mouth of a serpent which rises from the base for that purpose. The history and uses of the specimen are unknown.

Several others in the same collection reproduced the same attitude, but the animal supported was sometimes an enormous beetle, with branching horns, and sometimes a bird with a long beak, like the shamanic kingfisher of the Haida rattles.

## MASKS OF PERU.

The use of masks seems to have been much the same as in Mexico and on the northwest coast. Purchas states, on the authority of Vega (lib. 8, ch. 1, p. 2), that at Cuzco, at the feast of Corpus Christi, the Peruvians joined in the festivities and procession according to their habit in celebrating their own feast:

> After their wonted Pagan rites: *viz*, Some clothed with lion's skins, their heads enclosed in those of the beasts, because (they say) the Lion was beginner of their stocke; * * * others in monstrous shapes with visors [i. e. masks] with skins of beasts with strange gestures, and fayning themselves Fooles, &c. * * * Thus had they used to solemnize the Feasts of their Kings and thus in my time, sayth Vega, they solemnized the feast of the most holy sacrament. (Purchas, America, book ix, chap. 12, p. 946, edition of 1626.)

[1] Which are noted under their appropriate heads.

Maskoids of wood and terra cotta are not uncommon. In Squier's Peru (p. 90) he figures a maskoid of wood, which is reproduced here (figure 13). It is of rather rough construction, smeared with a reddish ochre and bears a notable resemblance to some found much further north. He states that it was found at Pachecamac, buried at the feet of a body, under a pile of stones. This specimen is now in the American Museum of Natural History in New York City and is number 954 of the Squier collection.

In the "Necropolis of Ancon in Peru" the authors[1] figure several mummies in their wraps. At the heads of several of them are attached very similar maskoids, projecting outside of the cerements and with various appendages attached at the back and sides. This recalls the Aleutian and Mexican custom of covering the face of the dead with a mask. It is entirely probable, from their similarity, that Squier's specimen had been originally attached in like manner and become displaced.

The United States National Museum has recently received a fine specimen of this sort of mortuary wooden maskoid, which is represented by fig. 14, Plate VI. Like the others, it is rudely carved, reddened with ochre and originally had several little cloth bags and other appendages attached to it. The original condition is restored as far as possible in the figure. The whites of the eyes are composed of oval pieces of white shell, set into excavations in the wood. A number of little locks of hair were put beneath them and the hair projecting around the edges well represents eyelashes. The irides are represented by bluish circular pieces of mussel (*Mytilus*) shell cemented on to the whites. This specimen, number 65376 of the museum register, was obtained by G. H. Hurlbut at or near Lima, in Peru. Its total length is 12½ inches.

## MASKS OF CENTRAL AMERICA AND MEXICO.

It is unnecessary to refer at length to the use of masks and maskoids in this region. The use of the human mask inlaid with obsidian and turquoise has already been described under another head. Beside this relic of humanity so strangely adorned, there is in the Christy collection a very similar wooden mask, inlaid with similar materials as well as red and white shell. This is figured in a magnificent manner by Waldeck,[2] and was used as described in the quotation from Sahagun

[1] Reiss and Stübel. See plates 14, 15, 18, and 19.

[2] Mon. Anc. du Mexique, p. viii, pl. 43. Another is in the Berlin Museum.

(p. 96). Maskoids of stone, terra cotta, jasper,[1] and jadeite from this region are to be found in most anthropological museums and are figured in all works on Mexican antiquities. Satirical maskoids in terra cotta are common. Some of the gold articles found in the graves at Chiriqui in Central America were of a maskoid character, though most of them were rude figures.

Some recent illustrations of antique Mexican paintings[2] show conventionalized figures wearing exactly the maskette head-dresses figured in this article from the Moqui villages.

After the death and shrouding of their "king" a painted mask set with jewels was put over his face.[3] The use of the Peruvian maskoids and the Innuit and Aleutian death-masks for the same purpose are to be noted in this connection.

## MASKS OF NEW MEXICO AND ARIZONA.

In the National Museum there are quite a number of maskettes and head-dresses from New Mexico and Arizona, one of which, together with a doll showing the method of wearing them, is figured in this paper.

22930 (Plate XII, fig. 15).—A doll obtained at the Moqui villages in Arizona, by Maj. J. W. Powell, and presented to the National Museum. It is figured to show the method of wearing the maskette head-dress about to be referred to, and also as illustrating the progress in conventionalizing the forms of which the head-dress is composed. Originally intended for human figures the forms became such as are figured on the head-dress (22942), and by a further progress the bare block patterns which we see on the head of this doll.

The colors are varied and their distribution only to be made intelligible by a colored figure. The doll's painted dress is white with red stripes. One stocking is green the other is partly yellow, both have black borders; the arms and eyes are black, the head-dress is green, red, black, and yellow, while the face is ornamented with blue, red, yellow, green, and white. The figure is one-eighth the length of the original.

22942 (Plate XII, figs. 16–17).—Moqui maskette head-dress collected by Maj. J. W. Powell at the Moqui villages in Arizona for the United States National Museum. The right-hand figure shows the front of the head dress, the left-hand one the back of it. The height of the original is seventeen times that of the figure. No less than thirteen figures are indicated on the arch of the head-dress, the principal one in the center with two supporters, then an intermediary, and finally four others at

[1] Ant. Mex., Du Paix, 1re expéd., pl. xv., figs. 16, 16a.
[2] Anales de Museo Nacionale, vol. iii.
[3] Purchas, ed. 1626, book viii, ch. ix, page 872.

each side. The whole is brilliantly colored with a variety of colors. Precisely similar head-dresses are represented in old Mexican pictures reproduced in the Anales of the Museo Nacionale of Mexico. The exact meaning of these and analogous articles used by the Zuñi Indians we shall probably learn eventually from the report of Frank N. Cushing, who has given some inklings of their nature in his recent articles in the Century Magazine.

## MASKS OF THE INDIAN TRIBES OF THE COAST AND ISLANDS OF WESTERN NORTH AMERICA, FROM WASHINGTON TERRITORY TO PRINCE WILLIAM SOUND.

The products of this region must be taken together for our present purposes, since it is well known that their customs, as regards masks, &c., are essentially similar, and also that it is a regular matter of trade for Indians of one locality and linguistic stock to make masks for sale to and final decoration by people of other stocks and habitat; so the essential features of a mask used by a Makah or Tlinkit Indian may have been designed and executed by a member of the Haida nation.

Among the Haida and Tlinkit especially, the style of ornamentation is artistic and characteristic, though in the last few years beginning to lose its purity before the march of civilization. It comprises a rather wide range of conventional figures, which are applied to many different articles beside masks, maskettes, and the totem-posts, considered as maskoids. The shamanic paraphernalia includes masks as a principal item, one for each of his familiar spirits, or at least different masks or maskettes, which are put on with strict reference to the particular power to be appealed to. In combination with them the rattle is a particular and essential item, and may be regarded as, in some sort, the shamanic scepter.

In their dances, of which Swan has given us the best, though a too-evidently incomplete idea, masks play, perhaps, the most important part; and here the invention of the Indian finds its widest scope. I have described a large number of the more interesting specimens in the National Museum, which, in this department, is richer for Northwest America than any other in the world.

They are divisible into dancing masks and head-dresses of which a maskette forms the most conspicuous part; helmets and shamanic masks of varied patterns,[1] and decoys.[2]

[1] Cook speaks of the great variety and grotesqueness of the masks used at Nutka and the rattles used by the medicine-man and at dances. He also devotes a quarto plate to figures of them. (See Cook's Third Voyage, vol. ii, London, 1784, p. 306, pl. 40.)

[2] According to Meares, the people of Nutka had in 1788 a dress for war, composed of thick moose skin, which was "accompanied with a mask representing the head of

### CUSTOMS AT CAPE FLATTERY.

In Swan's monograph of the Indians of Cape Flattery[1] some account of their tamánawas or religio-superstitious ceremonies and rites are given, together with the more social or semi theatrical performances which take place about the same time. The reader is referred to the original for the full account which is only summarized here. The facts contained in it are very valuable, though it is evident that the writer has not thoroughly mastered the true inwardness of what he describes, and indeed he freely admits this to be the case.

The figures of masks given by Swan are reproduced here, and comprise five masks and one bird's-head maskette. There is no special history given of them further than that they were used by the Makah Indians on the Cape Flattery reservation in the dances about to be described, and were mostly carved by Indians resident on Vancouver Island and sold to the Makahs, who paint them to suit themselves. See plates XIII, figs. 19–20; XIV, fig. 23; XVI, fig. 30; XVIII, fig. 40.

According to Swan, at certain periods, generally during winter, the Makah Indians have ceremonies or mystical performances, of which there are three kinds. These are the Dŭkwalli, T'siark, and the Dō-h'tlŭb. The latter is rarely performed, requiring much expense and many participants.

All these ceremonies are commenced in private, only the initiated being allowed to be present. What occurs is not known. Subsequent portions of the ceremonial are performed in public and spectators are admitted.

Swan infers from what he has seen that the Dŭkwalli is a ceremonial to propitiate the T'hlŭkloots or "Thunder-bird," who seems with the Makahs to take precedence over all other mythological beings. Into these ceremonies both sexes, and even children, are initiated, but this is entirely distinct from the process by which the youth selects his totem, familiar or guardian spirit, which is done in solitude and by night.

Swan believes that in these ceremonies there is nothing approaching our idea of worship. The Indians state categorically that there is not.

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some animal; it is made of wood, with the eyes, teeth, &c., and is a work of considerable ingenuity. Of these masks they have a great variety, which are applicable to certain circumstances and occasions. Those, for example, which represent the head of the otter or any other marine animals, are used only when they go to hunt them." (Meares' Voyage, London, J. Walter, 1790, p. 254.) "The seal is also an animal very difficult to take on account of its being able to remain under water. Artifices are therefore made use of to decoy him within reach of the boats; and this is done, in general, by means of masks of wood made in so exact a resemblance of nature, that the animal takes it for one of his own species and falls a prey to the deception. On such occasions some of the natives put on these masks, and, hiding their bodies with branches of trees as they lie among the rocks, the seals are tempted to approach so near the spot as to put it in the power of the natives to pierce them with their arrows. Similar artifices are employed against the sea-cow and otters occasionally. (Meares, l. c., p. 261.)

[1] Smithsonian Contributions to Knowledge No. 220, 1869.

The Makahs, like most American Indians, believe that all living things, even trees, had formerly human shape, and have been transformed for punishment or otherwise into their present condition. This was chiefly the work of two persons; brothers of the sun and moon, who came upon the earth for the purpose, and there is a large variety of myths and legends as to the reasons for and circumstances connected with particular transformations.

The above-mentioned ceremonies are exhibitions intended to represent such incidents. There are no persons set apart as priests for the purpose; some expert performers may take a principal part in each ceremony, but they are as likely to be slaves or common people as men of mark, and, except while so engaged, are not regarded as distinguished from the rest.

The Indians state that the particular ceremonies originate not with themselves, but with their guardian spirits, who communicate to one of them what should be done. He thinks out for himself, with such assistance, the mode of the exhibition, the songs and dances, and when the plan is perfected announces it to a select few, who are drilled in secret. When all is perfected the representation takes place suddenly and without announcement before the astonished tribe.

If any performance is a success it is repeated and gradually comes to be looked upon as one of the regular ceremonies of the kind; if it does not satisfy the audience it is laid aside. So it happens that they have some which have been handed down from remote ages, while others are of comparatively recent date.

The great ceremony of the Dŭkwalli originated with a band of Nittinat Indians, living near Barclay Sound, Vancouver Island, and was by them communicated to the Makahs. The legend upon which it is alleged to be founded is given in full by Swan in the paper referred to.

The performance is given at the expense of some individual, who often saves for a long time in order to accumulate property enough to carry it out. It is kept secret until nearly ready. Notice is given the night before the first day's performance by hooting and howling, firing guns, &c., and the initiated gather in the lodge and create a tremendous din. Torches are flashed through apertures in the roof of the lodge followed by a noise made to resemble thunder, after which all whistle in a manner to represent the wind. The uninitiated fly in terror. Every house is visited and the inmates invited to the ceremonies.

The first five days are devoted to secret ceremonies and initiations The first public performance is a procession on the fifth day of males and females naked, or nearly so, with their limbs and bodies scarified and bleeding. Invited guests receive presents. Every evening after the first secret days are over is devoted to masquerades, when each lodge is visited and a performance enacted. The masks are chiefly made by the Klyoquot and Nittinat Indians from alder, maple, poplar, &c., and sold to the Makahs, who paint them to suit themselves.

They are kept concealed until the performance begins. Many of them have the eyes, lower jaw, &c., movable by a cord. One such party was composed of men with frightful masks,[1] bear-skins on their backs, and heads covered with bird's down. They had clubs in their hands, and as they danced around the fire struck wildly about, caring little what or whom they struck. One of the number was naked, a rope around his waist and a knife in each hand, making a fearful howling. Two others held the rope as if to restrain him. Boxes and utensils were smashed and much damage done.

On another occasion the performers, who were males, with masks resembling owls, wolves, and bears, crouched down with their arms clasped about their knees, their blankets trailing on the ground and fastened around their necks with a single pin. After forming in a circle with their faces toward the fire they commenced jumping sidewise around it, their arms still clasped about the knees. Their exertions were continued several minutes; they were succeeded by about thirty women with blackened faces, heads covered with down, and a girdle drawing their blankets tightly to the waist. These danced around the fire singing as loud as they could scream, accompanied by the spectators, and beating time with sticks on boards placed before them for the purpose.

During the day performances were going on on the beach. Representations of all sorts were given. For instance, two naked boys, rubbed with flour, and with white cloths around their heads, symbolized cold weather. Others who wore masks resembling a bird's beak, and tufts of feathers in their hair, moved slowly near the water, raising and lowering their heads, and were intended to symbolize cranes.

At the end of the performance a young girl came out on the roof of the lodge wearing a mask representing the head of the thunder bird, which was surmounted by a topknot of cedar bark dyed red and stuck full of white feathers from eagles' tails. A smaller girl had a black mask to represent the ha-hék-to-ak, or lightning fish. The masks did not cover the face, but were on the forehead, from which they projected like horns. The ceremony closed with a reception, performance, and distribution of presents at the lodge, and the whole wound up with a feast. This Dŭkwalli is repeated at one or more villages every winter.

In the T'siark, which is a medical or curative ceremony, no masks are reported as used, but peculiar head-dresses are worn.

For the Do-h'tlub the reader is referred to the original, it being of essentially the same character as the ceremony of the Dŭkwalli, though older, and of course differing in all its details.

The Makah denominate these ceremonial masks hū-kau'-itl-ik.

From this summary the reader can form a very good idea of the way in which the dancing masks are used and how multifarious their variety may be.

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[1] See Plate XIII, fig. 18.

The masks strictly belonging to the medicine man are generally heirlooms, and mostly used in secret. The shamán is said to have one for each familiar spirit, in some way symbolical of that spirit, and which is put on when it is to be summoned by means of the magician's rattle. This instrument is worthy a more extended notice. They are generally elaborately carved and painted, and in old as well as modern specimens of remarkably uniform size.

## TLINKIT AND HAIDA MASKS.

With regard to the present use of masks among the Haida, the following information is extracted from Dr. Dawson's report on that tribe:

A cloak or blanket very much prized by the Haida, and called *nakkin*, is obtained in trade from the T'simpsian. It is shaped somewhat like a shawl, with a blunt point behind, and surrounded by a deep and thick fringe of twisted wool. The cloaks are made in many small separate pieces, which are afterward artfully sewn together. The colors of wool used are white, yellow, black, and brown, and the pattern bears a relation to the totem, so that an Indian can tell to what totem the cloak belongs. They are used specially in dancing, and then in conjunction with a peculiar head-dress, which consists of a small wooden mask (maskette), ornamented with mother-of-pearl. This stands up from the forehead, and is attached to a piece fitting over the head, ornamented with feathers, &c., and behind supporting a strip of cloth about two feet wide, which hangs down to the feet, and is covered with skins of the ermine. (Pp. 106B, 107B, l. c.) One of these is figured by Bastian, taf. 1, fig. 2, 2*a*.

Six kinds of dancing ceremonies are distinguished among the Haida. One is called *Ska-dul;* the women occupy a prominent place in this dance, being carefully dressed with the little masks and cloaks above mentioned. It requires no particular number of people, the more the better, and occurs only when a man desires shortly to build a house. One man performs on a tambourine, beating time, to which they all sing. The song is a sort of eulogy of the builder as well as the dancers, celebrating their strength, riches, &c., and is in the T'simpsean language, which many of the Haida speak fluently, and from which tribe many of their ceremonies appear to have been derived in comparatively recent time.

Another dance is called *Skarut*. One man (usually a hired dancer) performs this dance. It takes place some days before a distribution of property, on the occasion of such an event as the tattooing of a child, or death of a relative or friend. The dance is performed by a single man, naked, except for a breech-clout. In the first part of the dance, which appears to be intended to simulate a sort of possession or frenzy, one of the grotesque wooden masks is worn, and this is the only dance in which they are used. The wearing of the mask, however, is not absolutely necessary, but a matter of choice with the performer. Getting heated in the dance he throws the mask away, snatches up the first dog he can find, kills him, and tearing pieces of his flesh, eats them. This dance is not performed in the house as the others are, but at large through the village. (Pp. 128B, 129B.)

Masks are to be found in considerable number in all the villages, and though I could hear that they were employed for a single dance only, it is probable that there may be other occasions for their use. The masks may be divided into two classes: the first those which represent human faces; the second those representing birds. [Figures are given by the author on Plate VI, representing three masks and two maskettes,

one-tenth natural size.] They are carved in wood. Those of the first class are usually amply large enough to cover the face. In some cases they are very neatly carved, generally to represent an ordinary Indian type of face without any grotesque idea. The relief is generally a little less than in nature. Straps of leather fastened to the sides of the mask are provided to go round the head of the wearer, or a small loop of cedar-bark string is fixed in the hollow side of the mask to be grasped by the teeth. The top of the forehead is usually fringed with down, hair, or feathers. The eyes are pierced to enable the wearer to look out, and the mouth is also often cut through, though sometimes solid and representing teeth. Grotesque masks are also made in this style, but none were observed to have a smiling or humorous expression. The painting of the masks is, according to taste, in bars or lines, or the peculiar curved lines with eyelike ovals (stated by Swan to be derived from the spots on the lateral fins of a species of skate-fish native to these waters) found so frequently in the designs of the coast Indians. The painting of the two sides of the face is rarely symmetrical, a circumstance not arising from any want of skill, but intentional. Of the second class of masks, representing birds, there are various kinds. One obtained at the Klue village had a beak 5 or 6 feet long projecting from the center of a mask not much unlike those above described. The beak was painted red, and the whole evidently intended to represent the oyster catcher common to this coast (*Hæmatopus niger*). Another represents the head of a puffin (*Fratercula*). It is too small within to include the head and must have been worn above the head. (*L. c.*, pp. 177b, 178b.)

**The carvings on the rattles of the Tlinkit, especially those of the southern part of the Archipelago, are matters belonging particularly to the shaman or medicine man, and characteristic of his profession. Among these very generally, if not invariably, the rattle is composed of the figure of a bird, from which, near the head of the bird, or carved upon the back of the bird's head is represented a human face with the tongue protruding.**

**This tongue is bent downwards and usually meets the mouth of a frog or an otter, the tongue of either appearing continuous with that of the human face. In case it is a frog, it usually appears inclosed upon the tongue of a kingfisher, whose head and variegated plumage are represented near the handle in a conventional way. It is asserted that this represents the medicine man ascending from the frog, which has come through to him by the kingfisher, either going or coming by means of the effects of other people.** See Plate XXII. fig. 10.

In case it is an otter, the tongue of the otter appears the tongue of the medicine man is represented on the otter's tail. The heads of the figure and those of the otter (?) on the middle appear like in the drawings. The tongue of the otter goes only half the length of the figure representing the medicine man. It is a conventional head. There is a hole in the back of the head. The tail of the otter is figured in Swan's [illegible] fig. 6. [illegible]

The carving is represented but very rarely on other parts of houses and other objects connected with the medicine man. The [illegible] being in the house sometimes represented. [illegible] belonging to the practice of medicine had [illegible]

[illegible]

fasting for a considerable period, in order that his to be familiar spirit may seek him and that he may become possessed of the power to communicate with supernatural beings, if successful, he meets with a river otter, which is a supernatural animal. The otter approaches him and he seizes it, kills it with the blow of a club and takes out the tongue, after which he is able to understand the language of all inanimate objects, of birds, animals, and other living creatures. He preserves the otter's tongue with the utmost care in a little bag hung around his neck. The skin he also preserves; and it forms an important part of his paraphernalia.

This ceremony or occurrence happens to every real medicine man. Consequently, the otter presenting his tongue is the most universal type of the profession as such, and is sure to be found somewhere in the paraphernalia of every individual of that profession. In this way, these carvings, wherever found, indicate an association of the object carved with the medicine man. They may be either his property, or carved in memory of him. The last case seems to be confined to the totem poles.

This remarkable form of carving, namely, that representing a figure with the tongue out, and communicating with a frog, otter, bird, snake, or fish, is one of the most characteristic features of the carvings of the people who live between Oregon and Prince William Sound.

The same thing is found to a certain extent in Mexico. A cast of a terra-cotta figure in the National Museum (No. 7267), collected by E. H. Davis, represents in an almost identical attitude a seated figure, holding an animal, probably a fox, in its hands, whose tongue is continuous with that of the figure itself. Another (No. 10699), is very similar to No. 7267. One of the lava images from Nicaragua in the National Museum represents a human figure and animal in the same posture.

In the autumn of 1878, while passing through New York, I observed in the window of a shop devoted to curiosities, two masks from the South Seas, alleged to be from the Solomon Islands. From the materials of which they were composed and the opercula with which they were ornamented, there was no doubt as to their having come from the Indo-Pacific region, and the locality given was probably correct.

One of these masks represented a figure in the identical position above mentioned. The tongue protruded, the hands clasping by the middle a conventionalized animal, which I could not recognize. The fore legs of the animal touched the shoulders of the figure composing the mask. The hind legs rested upon his knees. The tail hung down between the hind legs, and touched the base of the mask. There was a space of an inch or more between the bellies of the two figures, as is usually the case with the figures represented on the rattles and other carvings from the northwest coast of America, previously referred to.

Afterwards, in attempting to secure this mask for the National Museum, being much struck with the extraordinary resemblance in nearly all its details to the masks made by the Tlinkits, it was found to have been disposed of, and could not be traced. Since then, in the American

Museum of Natural History in New York, I have observed numerous instances of a somewhat similar position of the figures composing masks from New Ireland and the vicinity of New Guinea.

The object with which the tongue was in communication was sometimes a snake, which then was furnished with other snakes or with branches resembling palm leaves proceeding from its body in imitation of arms and legs, and was very frequently either a bird or a very large beetle, of the kind which have enormous horns or jaws extending in front of the head. One of these is represented on Plate X, figs. 11–12, and, with others, has been referred to under its proper geographical head.

E. G. Squier has called attention to the fact that in carvings the tongue has been used by most (and especially by west) American peoples as an index to life or death in the object symbolized. The tongue firmly held forth indicates life or vigor and spirit; the tongue dangling helplessly from one corner of the half-open mouth signifies death or captivity doomed to end in death. The Mexican antiquities indicate this with great clearness, and from our knowledge of the Tlinkit myths, we are justified in considering that the touch of the tongue, as in the case of the otter, frog, and kingfisher, symbolized to them the transmission of spiritual qualities or powers. I learned from an old Aleut, who had been well educated and held positions of trust under the Russian regime in Alaska, that, formerly, among his people, the wife desiring sons of especial vigor took her husband's tongue between her lips during the generative act, and men who had no progeny were reproached as "short tongued." This appears to be an enlargement of the same idea, and that something of the same kind is symbolized by the South Sea Islanders, in their carvings of tongue-touching forms, is sufficiently evident from some of these articles which cannot be fully described here.

The following masks from the northwest coast have been examined:[1]

2658. Plate XIV, fig. 24. The mask was collected by Mr. Scarborough, of the United States exploring expedition under Wilkes. The locality may have been anywhere between California and British Columbia, as it is simply recorded as from Oregon, which name covered at that time a much larger area than at present. It is likely to be of Haida workmanship. It is one of the oldest specimens in the Museum, as the number indicates, and the most artistically carved of any I have seen from that region. It is made of Alaska cedar, smoothly carved, but brown and polished by age and use; mostly uncolored. The eyeball around the iris is whitened, the hair and other markings on the face are black. The hair of the mustache, beard, and head had been in-

[1] Since this paper was put in the printer's hands I have been able to consult a new work in which a number of masks from the Northwest Coast are most beautifully illustrated in colors and described. This is Dr. Bastian's Amerikas nordwestküste neueste ergebnisse ethnologischer reisen, etc., folio, Berlin, Asher, 1883.

dicated by some kind of furry skin, now hardly determinable, but which had been cemented to the wood with spruce gum. The mask is very light and thin. There are two holes above the corners of the mouth, into which a cord was probably pegged on the inside, to hold in the teeth when worn. It was doubtless used in games or dances, and has no indications of use in connection with religious or medical rites. In fact it is entirely different from masks used on such occasions. It probably is a very accurate representation of the physiognomy of the people by whom it was made and used. The figure is one fifth the linear size of the original.

2659 (Plate XIII, fig. 18).—Mask collected by R. R. Waldron, of the United States exploring expedition under Wilkes, on "the northwest coast of America." Exact locality and history not stated. This is a remarkable and well-executed specimen, but thick and heavy. It is carved of Alaska cedar, which comes to the surface on the lighter parts of the ribbed marginal band. The parts representing the face are black. On the upper part of the back, on the cheeks, on and between the eyebrows, on each side of the nasal septum, and on the forehead are spots where bits of mica have been fastened on with spruce gum. The whiskers, represented by transverse lines, the form of the nose, and other features suggest that the carver may have had a sea-otter in mind. There are pegs on the posterior edge whose use may have been to retain a netting or lattice by which the mask was held on the head. A withe, knotted and twisted, arranged to be held between the wearer's teeth, is fastened to the concave interior on each side of the nasal septum. The article is evidently of great age, and bears signs of having been long in use. The figure is one-fifth the linear size of the original.

A very similar mask from Nahwitti, on the northwest end of Vancouver Island, is figured by Bastian (l. c. taf. 2, fig. 2), with the information that it is worn in the medicine dances by the so-called "wild-men" who, as described by Swan, are given to assaulting the bystanders indiscriminately, and hence are to be avoided. This mask, however, is painted with red and other bright colors, and is adorned with whitish feathers. It is said to be called "nutlematlekull."

20892 (Plate XVII, figs. 31–32).—A dancing mask; obtained from the Haidas of the Klemmahoon village, Prince of Wales Island, Alaska, by James G. Swan. This mask is carefully carved of Alaska cedar. The ears, nostrils, lips, edges of the eyelids, and the continuous stripes across the face are red. The short dashes forming a band between the stripes are lead-colored, and appear to have been made with a soft piece of micaceous iron ore. The eyebrows and mustache are stripes of blue blanket cloth fastened on with pegs. Hairs from a fox-skin are pegged into the chin, and it looks as if other hair might have been so fastened on the upper edge of the mask. Within there is a loop of withe to be held in the teeth. The mask is thin and light.

21573 (Plate XVIII, figs. 42–42).—Another incomplete or unfinished dancing mask, probably of Haida make, obtained by Dr. White, of the United States Army, in Alaska, for the National Museum. This one was evidently made for sale, and had never been used or made fit for use. The wood was fresh and unstained, and no peep-holes or breathing holes or arrangement for fastening the mask on a wearer's head had been made. It represents a face with a tiara of bear's claws over the forehead. The lips, ears, nostrils, and band below the tiara are red, colored with oil paint obtained from the whites, as is the rest of the painted work. The bear's claws, pupils of the eyes, and the hair are black; the irides greenish; and the dark tracery on the face, shown in the figure, as well as the upper bar of the head-dress are blue. The light parts of the figure in the original show the uncolored natural wood. This is one specimen of many which have of late years been brought from the northwest coast, which have been made expressly for sale as curiosities, and which want essential parts which should be found in an article used or intended for use. A ring made of brass wire is inserted in the nasal septum, but such is rarely, if ever, now worn by the people of the Archipelago. The figure is one-fifth the linear size of the original.

20570 (Plate XVI, figs. 28–29).—Dancing mask from Bellabella, British Columbia, collected by J. G. Swan. The upper mandible was carved separately and permanently pegged to the face. The lower mandible is movable, and was made to rise and fall by pulling a line of twisted sinew which passes back and out behind over a rounded stick, pulley-fashion. The mask was held on by cords behind. The interior is quite roughly hollowed out. The surface of the face was whitened before being painted; that of the bill is bare wood, except where painted. The eyebrows and pupils are painted black; the eyes, inner edges of the mandibles and nostrils and light lines on the forehead, red; the quadrangular figures on the forehead, blue; other painted parts, bluish green. The mask is probably a conventional representation of the head of the sea-eagle or "Thunder bird" of Tlinkit mythology, of which mention is made elsewhere. It is not possible to determine exactly the meaning of some of these carvings, for, as observed by Swan, the Indians allow their fancy the wildest flights in the manufacture of dancing masks, while the conventional figures, having tolemic or ritualistic function, are quite carefully maintained in their chief characteristics. The figure is on a scale of one-fifth, linear.

30209 (Plate XVII, figs. 33–34).—Dancing mask, representing a death's head, bought at Barclay Sound, Vancouver Island, of the natives belonging to the tribe usually termed Nūtka, by J. G. Swan. This is an extremely old mask, and the soft spruce wood of which it is made shows signs of decay; perhaps was selected as appropriate for the purpose on that account. It bears a ghastly resemblance to the visage of a dried-up corpse. The inside of the mouth is black; the general surface has been rubbed with a whitish earth, giving it a moldy appearance. It is pro-

vided with bushy eyebrows of wolverine skin (*Gulo luscus* L.), between which is a notch in the wood from which something once attached there has fallen away. It was fastened to the head of the wearer by cords which were attached at a hole within behind the forehead, and also one at each side. The length of the original is 11 and its breadth 9 inches. Another very similar mask from Neeah Bay, figured in Swan's paper on the Indians of Cape Flattery is reproduced here (Plate XVII, fig. 35).

20578 (Plate XIII, fig. 21).—A well-carved modern mask, collected by J. G. Swan for the National Museum at Bellabella, British Columbia, near Milbank Sound; history wanting. It is carved of Alaska cedar, rather thick and heavy. The ears, nostrils, lips, upper forehead, bands around the face and across the cheeks are colored red; the eyebrows and irides are black. The remainder of the portions dark-shaded in the figure are blue, powdered while wet with triturated mica, which adhered when the paint had hardened. The surface of the wood is bare in some of the lighter-shaded portions. The eyes are not perforated, the wearer peeping through the nostril holes. This mask was held on by cords passing through its ears and around the nasal septum. The interior is soiled with red paint, which appears to have been rubbed off the painted face of the wearer. This is also evidently a festival mask, not used in connection with, or, at least, not symbolical of, superstitious or totemic ritual. The figure is one-fifth the linear size of the original.

23440 (Plate XVIII, figs. 38–39).— Dancing helmet from Neeah Bay, collected for the National Museum by J. G. Swan. This is carved of alder wood, and was probably made by the natives of Vancouver Island for sale to the Makahs of Neeah Bay, near Cape Flattery. It represents the head of a hawk or eagle. The under part of the beak is hollowed out for lightness, but a cross-bar is left for strength. Three cords extend across the back from one edge to the other over the head; the points where they are fastened are shown in the figure. The dark portions in the figure are black in the original, the next lighter are red; the parts represented as white in the figure are the natural color of the wood. The length is 14 and the breadth 8 inches.

20890 (Plate XIX, figs. 43–44).—Dancing helmet or maskette, from Kaigahnee Strait, Prince of Wales Islands, Alaska, collected by J. G. Swan for the National Museum in 1876, and obtained at the Klemmahoon village. The head and dorsal fin are of alder wood; the back, tail and lateral fins of hide or leather painted over. Underneath the top is a broad band of sealskin to go behind the head and hold the helmet on, and there are some strips of buck or moose skin to tie under the chin. The fringe at the back of the dorsal fin is composed of locks of human hair pegged in. The figure was reported as intended to represent a sculpin (*Cottus*), but it is more likely to be a killer whale (*Orca*), to which the long dorsal fin and flat tail certainly belong. It may have been intended as a sort of combination. The upper half and base of the dorsal

fin, the pupil, eyebrows, the outlines of tracery on fins and tail, all black. Teeth, nostrils, eyeballs and basis of tracery on fins and tail, white. Area around the eyes and nostrils and the chin blue. On the stout hide; composing the fins and tail, something like white paper seems to have been pasted, upon which the black tracery is painted. The figure is on a linear scale of one-fifth the size of the original.

30210 (Plate XIV, fig. 22.).—Dancing mask from Nutka, Vancouver Island, made of pine wood, collected for the National Museum by J. G. Swan. The lips, the margin of the mask, and the band on the left cheek are red; eyebrows, tracery around the eyes and narrow band on right cheek, black. The remainder is the natural color of the wood. The hair is made of the cambium layer of bark of some tree washed free of sap, dried and beaten into threads. The cords by which it was fastened are gone; some remnants still remain around the margin of the mask. A sort of wooden lattice is pegged behind the mouth, inside the cross-pieces seen through the opening from in front, and marked by a transverse black line to imitate teeth. There is a loop within to be held in the teeth. The resemblance between this and the South Sea mask figured on Plate IX is noticeable. The figure is on a linear scale of one-eighth.

30211 (Plate XV, figs. 25–27).—Dancing mask with movable wings from Nutka, Vancouver Island, collected for the National Museum by J. G. Swan in 1876. The material is the same as in 30210, with the addition of a row of upright feathers in the top of the wings and face. The hair is of bark like the latter, but has the down of some feathers stripped from the shaft and mixed with it. The upright feathers over the face are in front of the hair, and are lashed to a bent stick behind the upper margin of the face. The hinder side of the wing has an eye-like spot painted upon it. The front has a rude human figure in black and red; a red line below the chin and around the cheeks; eyebrows and irides black, eyeballs white. The remainder of the surface is of the natural color of the wood. The peepholes are through the nostrils. The wings are lashed firmly in three places to an axis, which plays in a wooden spool at top and bottom. These spools were firmly fastened to the mask by lashings not shown in the figure to avoid confusion. The diagram shows the framework by which the mask was held on the head, and the ingenious mechanism for flapping the wings. A represents the upper part of the left wing near whose upper edge a cord, B, is pegged to the outside, passing over the upper margin of the mask, and down through a hole in the medial bar of the frame; thence backward through a hole in the rounded end of a transversed bar of the frame, and then C, downward to the hand of the wearer. The wings were hung so that they naturally tended to swing backward; a pull on the cord would send them forward, and they would recoil of their own weight. When worn, a large mass of the same sort of stuff as the hair was put into the upper

part of the frame as a cushion for the head, and to raise the peepholes nearer to the eyes. The figure is one-sixth the linear size of the original.

2662 (Plate XXI, fig. 47).—Maskette from the northwest coast of America collected by E. Very during the Wilkes Exploring Expedition. The material is birch wood and the mask has been hollowed out by a small gouge probably made from a beaver's tooth. The light places in the figure at the eyes, teeth, spots below the claws, &c., are thin flat pieces of haliotis (*H. Kamchatkana*, native to the region) fastened on with spruce gum, mostly with a hole in each piece of shell. The colors are dark brown or black, red and green; the bare wood shows in a few places. The part of the carving which is behind the lower figure was applied to the forehead and is hollowed out for that purpose, showing signs of having been worn. The head-dress to which it was attached did not accompany it. The lower figure in the front is a conventionalized figure of the sparrow hawk, (*Tinnunculus sparverius L.*); the upper larger one that of the beaver; a close inspection shows that the apparent beak was intended to represent the two large incisors. The figure which is on a scale of one-fifth linear represents it as more rounded in front than in reality, and the median line dividing the two incisors, which is quite indistinct in the original, has been overlooked by the artist. The cancellated appendage between the feet is intended to represent the tail of the beaver.

9259 (Plate XXI, fig 48).—Maskette collected near Sitka by Dr. A. H. Hoff, U. S. A., for the Army Medical Museum and transferred by that institution to the United States National Museum. The figure is one-fourth as long as the original. The eyes and certain patches visible above the hands and feet are formed of pieces of Haliotis shell cemented with spruce gum. The arms, tongue, and feet are red. The rest is more or less blackened. The figure above is the otter, with his tongue out; that below is the frog; both are familiars of the medicine-men, to one of whom this carving undoubtedly appertained. The head-dress, of which it originally formed a part did not come to hand. This belonged to some shamanic paraphernalia.

20581 (Plate XX, fig. 46).—Maskette, used with a head covering, collected at Fort Simpson, British Columbia, by J. G. Swan for the United States National Museum. The figure is one-fifth the length of the original. It represents the features of an old woman with her face painted and wearing a labret or kalushka. It is made of spruce wood. The tracery on the front of the cheeks and on the forehead is cobalt blue. The sides of the cheeks, the hair-parting, ears, and mouth are red. The hair is black, with some red streaks; the pupils are black, with a small perforation burned through; the remainder of the face of the natural color of the wood, somewhat darkened by age and use. The eyebrows are of bear-skin, the strips only tacked at the outer ends. To the inner ends threads are attached which pass through four pinholes in the forehead and through a staple opposite the chin inside. By pulling these threads

the eyebrows could be raised or lowered at the pleasure of the wearer. There is an arched mouth-bar inside to be held in the teeth when dancing, in order to keep the head dress steady.

2666 (Plate XX, fig. 45).—Dancing maskette, representing a woman's face with a very large kalushka or labret, collected by the Wilkes Exploring Expedition on the northwest coast of America in 1841. No history. Probably of Haida make. Painted with a dull red stripe around the right side of the face; a few narrow lines on the left cheek. Length 7½, width 7 inches. This is figured chiefly to show how the kalushka was worn.

No. 2785. Tlinkit dancing maskette, collected by J. G. Swan, Sitka, Alaska. This specimen represents a heavy wooden helmet of a rounded conical shape, with a mask carved upon it, forming part of the same piece of wood. This mask represents a grinning face, half red, half blue, with broad, black eyebrows, white teeth, mustache and goatee of bear skin, and hair, which apparently once stood upright, pegged in on the top of what would have been the head. This is a fair instance of those cases in which the mask serves as a mere ornamentation to the helmet. It is understood that this particular helmet was used in dancing; but there is no doubt that similar ones were—and the thickness of this is such that it might be—used as a means of defense in war.

In the National Museum collection are a great variety of these dancing helmets and a few of those intended for defense. They represent various animals, conventionalized in the usual manner and similar to those which are used in the mask proper. Those masks which are attached to the helmets, or form part of them in those cases where the helmet is a single piece of wood, are, of course, not perforated or pierced in any way except for nose or ear rings or other appendages. As the object is intended to be placed entirely on top of the head, there is no necessity for any perforation for sight or respiration.

In some cases the upper part of these head-dresses represents a fish, whose body is partially opened, or is so carved that it appears like a hollow lattice work, within which may be seen a human figure. This is in allusion to a particular myth, of which I have been unable to obtain the details.

2661 (Plate XVII, figs. 36–37).—Shamanic mask, symbolical of the eagle or totemic "thunder bird," obtained by the United States exploring expedition under Wilkes on the northwest coast of America. The eyebrows and bill are black, the caruncle over the back of the bill and the tongue within it are red. It is a thin and light carving of cedar wood, trimmed with swan-skin, having the down attached. It was held upon the head by means of a netting made of cord twisted from bark fiber, and which was once attached in many places to holes in the posterior outer and upper edges of the mask. This form is not uncommon. I have seen several in collections. The figure is one-sixth the size, linear, of the original. The myth of the "Thunder bird" refers to a gigantic bird

which takes whales in its claws and devours them, the flapping of whose wings produces thunder, and who launches (at Neeah Bay) a supernatural fish[1] (*Hippocampus*), which appears to mortals as lightning. The Tlinkit form of the myth may be found in Alaska and its Resources, pages 423, 424.

This myth, in some form or other, seems to be very widespread on the West American coast. I have been informed that the ancient Mexican mythology included a belief in such a creature. Further north it is known to be spread from Washington Territory to Prince William Sound, where the Innuit begin to occupy the coast. Prof. E. W. Nelson astonished me by declaring that it exists among the Innuit of the shores of Bering Sea, and proved his point by producing a carving of the very bird from the Diomede Islands in Bering Strait.

This is another of the links which bind diverse West American nations into a mysterious partnership.

[1] See Swan, Indians of Cape Flattery, pp. 8, 9.

## MASKS OF THE INNUIT.

It is generally known that the Innuit or Eskimo form one of the most distinct, sharply defined, and homogeneous aboriginal stocks in America. Their only offshoots are the Aleuts, who have undergone a local development under special conditions, which has altered them in many respects from the parent stock; and the Yūit of the Asiatic side of Bering Strait, forced emigrants from America, who, from hunger, privation, constant association with the alien Chukchi, and separation by hostility from people of their own race, have become to a certain extent degraded and crushed.

Apart from these, in language, traditions, arts, handiwork, mode of hunting, and even for the most part, in physique, the Innuit of Labrador and those of Aliaska Peninsula are separated by no differences of an essential kind. Their lives are, of course, modified to their particular environment, but it is said, and I believe with truth, that a man, understanding thoroughly the dialect of either extreme, could pass from village to village, from Greenland to Labrador, from Labrador to Bering Strait, and thence southward to the Copper or Atna River, staying five days in each halting place, and that in all that journey he would encounter no greater differences of speech and customs than he could master in the few days devoted to each settlement.

Probably there is no other race in the world distributed over an equal territory, which exhibits such solidarity.

From this Dr. Rink argues that they must at some time have been distributed in much more compact fashion, and attained nearly their present degree of culture before their separations and migrations began, a conclusion which seems eminently sound.

It is possible that the Aleuts branched off somewhat earlier, but we have every reason for supposing that the Yūit have passed into Asia within three hundred years at most. According to Gibbs and Swan, the Indians of Fuca Strait have distinct traditions of the Innuit as a race of dwarfs, who live in "the always dark country" on the ice, dive and catch whales with their hands, and produce the aurora borealis by boiling out the blubber, it being the reflection from their fires on the sky. They are magicians, and their names must not be pronounced. As the Western Eskimo, on the whole, are nearly as tall and quite as athletic as the Indians, this idea has probably been transmitted from North to South with its attendant modifications in passing from mouth to mouth, rather than derived from any actual contact in the past.

However, the point to be brought into the strongest light is the fact that, notwithstanding the homogeneousness of the Innuit race, the prac-

tice of labretifery and the use of death masks, as well as the profuse adornment of themselves with dancing masks for pantomimic mythic ceremonies, are confined to those Innuit west of the Rocky Mountains and the Colville River, and these features, especially labretifery, are practically unknown to their kindred in the east, with whom, nevertheless, they have annual communication for purposes of barter.

On the other hand, the ceremonies and use of masks, particularly in pantomimes, are extremely and essentially similar to those of the Tlinkit, Haida, and Makah previously described.

The adjacent Tinneh, a weak and cowardly people, have imitated these customs as they have the Innuit dress; but the inland Tinneh, two or three hundred miles inland, know nothing of them.

The use of masks among the Innuit, as elsewhere, is shamanic, pantomimic and ceremonial; and in some exceptional cases mortuary.[1] The Aleuts will be separately considered. The Innuit of Prince William Sound, from the ancient masks herein described, seem to have had less than the usual artistic taste and ability. However, this lot may have been made for a temporary purpose with the idea of throwing them away when that had been accomplished (as was a not uncommon practice), and therefore may not afford a fair criterion.

From Kadiak Island northward to Norton Sound there appears to be great similarity, though it is only where the whites are little known that these matters retain a pristine vigor. On the Lower Kuskokwim, and on the Yukon delta, especially the southern part, is a region which was found by Mr. Nelson particularly rich. The collection of masks obtained by him seems exhaustive, and is not equaled in variety and interest in any other museum in the world. Unfortunately, his health has suffered from his too great devotion to science, and he has not yet found himself able to classify and describe these treasures, or this chapter need not have been written.

Beyond Norton Sound some very rude but curious masks were obtained by Nelson at the Diomede Islands, Bering Strait, and at Point Barrow, the northernmost extreme of Alaska, a few artistic and interesting masks were obtained. The latter, however, judging from those collected, are almost wholly wanting in the element of the grotesque which is so rife in Bristol Bay, or the Kuskokwim and Yukon deltas.

Further information in regard to these northern people will probably

[1] It seems that they were occasionally used as decoys, as previously noted by Meares among the Tlinkit. Lisianski says: "Next to the otter the most valuable animal in the estimation of the Kadiak men, is the species of seal or sea-dog called by the Russians nerpa. It is caught with nets made of the same material as the line of the sea-otter arrow; or killed when asleep; or, which is the easiest manner of taking it, enticed toward the shore. A fisherman concealing the lower part of his body among the rocks puts on his head a wooden cap or rather casque resembling the head of a seal (Plate iii, fig. c), and makes a noise like that animal. The unsuspicious seal, imagining that he is about to meet a partner of his own species, hastens to the spot and is instantly killed. (Lisianski, l. c., p. 205).

soon be available on the return of the party lately stationed at Point Barrow by the Signal Service.

The figures will give a better idea of the masks and their appendages than can be expressed in words. A few remarks in regard to the object of these pendants, &c., may not be out of place.

When the wearer is dancing the feathers and other appendages attached flexibly to the margin of the mask will move backward and forward in correspondence with the motions of the wearer, a feature which is considered by these people as a very important part of their appearance while partaking in the dance.

These dances are usually made to the sound of a parchment drum or tambourine struck with a long wand by one of the older men of the village. He is frequently accompanied between the intervals of drumming by some person who sings a few words alternating with a uniform chorus in the customary Innuit fashion. To this the spectators, most of whom are women, add their voices in chorus. These songs are descriptive of some event such as might occur on a hunting, fishing, or other expedition, generally relating either to some of their mythic legends, or to actual events which have taken place to the knowledge of those present. At some crisis in the song, the little doors of the mask will be thrown open, and the chorus will be suddenly changed. The disclosure of a humorous or terrifying face, where none was seen before, by suddenly opening the little doors (which are pulled open by small strings which pass inside the mask), is supposed by these people to have something particularly humorous or startling about it.

The finger-masks, of which some descriptions will be given, are worn by the women on their forefingers during the dance, and are, perhaps, peculiar to the two deltas. They are also variable in character, and represent often heads of animals as well as the faces of human beings. The latter are sometimes normal and sometimes ludicrously distorted. Often small figures, representing on a much diminished scale the complex maskettes which we have just described and like them furnished sometimes with miniature doors or flapping wings, are attached to the borders of large masks, to portions of the dress, or to wands or other articles held in the hand by the dancers. Many such are contained in the collection of the National Museum.

Among the humorous or ludicrous masks, which represent conventionalized animals or portions of animals, there are some which show either human faces or whole human figures, either concealed by flaps or carved in depressions on the surface of an animal mask. Some represent in a rude manner the head of a merganser, or saw-billed duck. The head is, however, resolved into a rounded, convex, anterior portion like the bottom of the bowl of a very large ladle. The bill, with its long teeth represented by pegs, is bent backward over the top of the head almost exactly as the handle of a ladle. The rounded part, however, has lost all resemblance to a bird's head, and is carved to repre-

sent a human face more or less distorted, from which the groove between the two halves of the bill passes perpendicularly upward, and then backward over the head, starting at the root of the nose belonging to the human face.

In other cases, as for instance when the head of a seal is represented, the carver not unfrequently represents, instead of the eye, on the other half of the mask corresponding to that which is carved in a normal manner, a small human face, perhaps on the broad grin, supplied with hair in little locks pegged in, with teeth, ear-rings, or miniature labrets.

The masks most commonly carved in this way are those representing the head of a fox, wolf, or seal. It is a common thing in all the masks, human and animal alike, to have the tongue loose, so that it will rattle or move with the motions of the dance, or to have miniature arms, legs, or wings attached to the mask at the margin, which are intended to move in the same way. They are generally lashed to the stump of a feather, the quill of which is pegged in and whittled to a point outside, to which the appendage is attached and which gives it the necessary flexibility.

Masks of the kind above mentioned may be found in the National Museum collection under the numbers 38865, 38733, 38861, 48985, etc. Most of these were collected by Mr. E. W. Nelson. The masks from Point Barrow are particularly distinguished by an artistic finish and the extremely faithful way in which they represent the features of the Innuit of that vicinity, who bear a stronger resemblance to their Greenland relations than do the Innuit of Alaska further south, a circumstance doubtless due in part to the fact that their surroundings are much more like those of Greenland than is the case with those of the coasts of Norton Sound and Bristol Bay.

Labrets are of comparatively rare occurrence on these masks, although all the male members of the tribe wear them.

## INNUIT OF PRINCE WILLIAM SOUND OR CHUGACH BAY, ALASKA.

An interesting series of rude and evidently very old and much weathered masks was received some years ago by the National Museum from the Alaska Commercial Company of San Francisco. They had been collected by their agent at Port Etches, in response to a general order from the company requesting such collections.

These masks were carved out of nearly flat slab-like pieces of Sitka spruce (*Abies Sitkensis*), and exhibit little or no artistic skill. They had originally been ornamented with feathers and with rude attempts at decoration with red argillaceous iron ore, the only source of the red color known to these people before vermilion and other civilized paints were introduced by the whites. It is a curious fact that some one had

made an attempt to furbish up the old painting by daubing on a little vermilion and by sticking a few new feathers into the holes, whence the old ones had rotted away. I suppose that these masks were old dancing masks, which, as was sometimes the custom, were thrown away after the festival was over into some convenient and perhaps habitual rock-shelter. There they had lain many years, for wood decays with great slowness in this climate when not actually subjected to periodic soakings and dryings. When the agent had appealed for "curios" to the natives of the adjacent villages, some one had thought of these old masks as a means of procuring some tobacco, and having brought them in, supposed a little brightening up would not make the price any smaller, and so, before presenting them to the agent, added the vermilion and new feathers. At least this is the way I interpret the evidence of the specimens.

The attempts at humor in the make-up of these masks give one a very poor idea of the wit of the makers. These efforts are confined to elevating one eyebrow and depressing the other; to tipping the straight gash by which the mouth is represented up or down at one corner; to representing the left eye as half-closed, closed, or even absent; painting one eye red and leaving the other blank.

It is to be remarked that though these people are the most southeastern of all the West American Innuit, and in constant communication with people of Tlinkit stock, there is not the slightest similarity of style between their masks and those of their Indian neighbors. Indeed, they are not much like those of the present Innuit tribes of the peninsula and eastern coast of Bering Sea, nor of the Aleuts in details. But the style is distinctively Innuit, nevertheless.

These masks are described below and figured, as it seemed they were well worth it, notwithstanding their rude execution.

None of the present inhabitants of Prince William Sound appear to wear labrets; at least I saw none with them, though they were formerly worn by the males, and of the usual Innuit type, *i. e.*, that resembling as nearly as possible a "stove-pipe" hat.

With the exception of fig. 20265, these masks are figured on a scale of one-eighth the size of the originals.

20265 (Plate XXIII, figs. 54–56).—Dancing mask made of white spruce wood, very rude and cumbersome, contributed to the National Museum by the Alaska Commercial Company, collected at Prince William Sound by their agent. History wanting, but they all bear evidence of much weathering and were doubtless obtained from some rock-shelter, where they had lain many years. The figure shows the shape, which resembles the conventional form adopted by the Innuit of the western coast for the head of the "bowhead" whale (*Balaena mysticetus*, L.). A similar carving, very minute, but representing the same subject, was dug out of shell heaps at Port Möller by me in 1874, and figured in the first volume of the Contributions to American Ethnology (P. 87, fig.

16089). It is also in fashion of a mask and was probably lashed to some part of a head-dress. The figure is reproduced here for comparison (Plate XXIII, figs. 57–58).

There is a faint trace of red ochre on the median keel of this carving and on the upper back edges, and there are numerous holes along the outer edges where feathers had once been pegged in. There is nothing to indicate how it was to be held on the head. The original is 26 inches in length and 9¼ in breadth.

20263 (Plate XXIII, figs. 51–53).—Dancing mask; record the same as that of the preceding. The figure shows the shape. There is a band of red ochre over and under the lips and on the border of the lower bevel. On the upper bevel is a half moon and some irregular blotches, now quite faint, but originally intended to indicate seals or fishes. There was originally a lattice behind with three cross-sticks and two uprights to hold it on, besides a mouth-bar of wood, which, however, showed no tooth-marks. There was no indentation to accommodate the neck. There had been one feather pegged to the upper margin over the nose. There was no indication whatever of a left eye in this one, and it does not seem to have been much used.

20267.—Dancing mask from Prince William Sound; history similar to the preceding numbers; rude and heavy. This mask is well represented by the figure; it is somewhat decayed from exposure and must be very old. There is a shallow groove with a red blotch under it for a left eye. There are traces of red ochre around the mouth and on the upper border. The right eye is not colored. There was a feather pegged in at the top on each side. This is known by the decayed remains of the quill around the peg. Head lattice gone, but places where two cross-sticks were lashed still visible.

20267.

20269 (Plate XXV, figs. 63–64).—Dancing mask; same record as the preceding. Upper border indented by a rounded notch, as seen in the figure. Originally there was one feather in each horn or process at the sides of the notch. In the furbishing-up already alluded to a new feather had been stuck into one of the old pegholes. The forehead is perforated. The nostrils, as in all this series, serve as peepholes. Above them on the back of the mask and below the forehead perforation the red ochre from the wearer's forehead had been rubbed off on the wood. Such incidents give a human interest to these relics which otherwise they seem almost to lack, like fossils. The nose was greenish, and a stripe of the same runs up to the point where the feather was pegged in, one on each side. There is some red around the mouth, radiating streaks about the forehead hole (sun?); the moon on forehead is red and also

the right eye and in general the edges of the mask. The back has no neck indentation, but a heavy lattice bar, to which apparently were once attached three or five lattice sticks.

20268. (Plate XXIV, figs. 60–62).—Dancing mask; material and history as in the preceding specimens from Prince William Sound. The figure gives a sufficient idea of its form. Remains of red ochre are perceptible in a band around the mouth and around the edge of the mask; the right eye is red, also concentric circle and radii around the hole in the forehead (to represent the sun?) and a red half moon above it. Red paint from the wearer's face also visible in the interior of the mask where the two had come in contact. A V-shaped groove extends from the root of the nose upward to the insertion of two feathers, one on each horn of the mask. On each side there were originally six feathers, pegged in; peepholes at the nostrils where a fragment of sinew thread indicates that a nose ornament was hung, and, inside, a small bar of wood lashed with strong sinew by the middle and by a cord about an inch long to the nasal septum. This was held in the teeth and took the place of the ordinary arched mouth-bar, fastened at both ends. The lower margin of the mask is indented or excavated in the middle, the better to receive the front of the neck. The lattice mostly gone.

To show the way in which these masks were usually held on, a restoration of the back of this or a similar mask has been figured. The notch for the neck, the ⊥-shaped mouth-bar, and the lattice are shown in a way the imperfect and decayed condition of the originals would not admit of.

A strong bar was lashed horizontally near the top of the mask by its ends. A variable number of uprights were rigidly lashed to this bar and their free ends to a loose bar. The torsion exerted on the upper horizontal bar, when the head was inserted between the lattice and the mask, held the latter like a spring upon the head, and more steadiness was added by the mouth-bar being held between the teeth. There were numerous small variations on this plan, but the essential principle was in nearly all cases the same.

20264. (Plate XXV, fig. 65).—Dancing mask from Prince William Sound; record as above. This specimen is imperfect. There are remnants of blackish coloration on the nose, running up to a point on the forehead. On the upper bevel of the mask red blotches rudely indicate two fish on each side, and a seal in the middle with a narrow crescent below them. From the projecting ball of each eye a seal is represented as hanging, facing the nose; a seal is represented on the side of the forehead and two on the cheeks looking outward; on the right side there are three, and on the left four red circles above the upper lip, which, as well as the lower slope of the eyebrows, is reddened. The left eye was originally reddened. A strip of whalebone and a feather were stuck into the upper lip on each side. A bit of fur had been bound around the upper edges. The mouth-bar was attached to the nasal

septum by a cord around the middle. The lashings were of sinew, and there are many peg-holes at the sides, but the ornaments they fastened long since disappeared.

20266 (Plate XXIV, fig. 59).—Dancing mask from Prince William Sound; record and general appearance much likethe last, as will be seen by the figure. There are traces of red ochre over the lip, on the right eye, on the eyebrow, and some nearly effaced figures on the forehead. A number of feathers had been pegged to the side margins. The left eye had not been colored. The peep-holes were through the nostrils, the lattice entirely gone.

From the same locality as these masks a dried body was sent, which still showed labret holes in its withered cheeks and a perineal incision, by which the viscera had been extracted in order to dry the remains. No record of particulars accompanied the specimens other than that above referred to.

## INNUIT MASKETTE FROM KADIAK ISLAND.[1]

16268. (Plate XXVI, fig. 67,)—Maskette of the Kaniagmut Innuit, obtained at Saint Paul, Kadiak Island, Alaska, by William H. Dall. The size of the disk is 8 by 5 inches. It is imperforate. The disk is rather heavy and thick, but carefully carved after one of the ancient model by one, or under the direction of one, of the old men of the village. It is painted white, with lines and tracery on it of red, blue, and black. The disk is surrounded by a narrow, flat hoop, through which are passed the quills of three large dark feathers on each side. A little in advance of

[1] The customs of these savages (Innuit of Kadiak) are nearly allied to those of the Oonalashkans. They have the same kind of instruments, darts, and boats, or baidars, but much worse made; nor are they so active upon the water. Their dances are proper tournaments, with a knife or lance in the right hand and a rattle in the left; the rattle is made of a number of thin hoops, one in the other, covered with white feathers, and having the red bills of the sea-parrot suspended on very short threads; which, being shaken, strike together, and make a very considerable noise; their music is the tambourine, and their songs are warlike. They frequently are much hurt, but never lose their temper in consequence of it. In these dances they use masks, or paint their faces very fantastically. (Sauer, in Billings' Voyage in 1792, on Kadiak Innuit, p. 176.)

November they spend in visiting each other, feasting in the manner of the Oonalashkans, and dancing with masks and painted faces. (Sauer, l. c., p. 178.)

They still observe their annual dance in masks, and with painted faces; the masks are called *kugah*, and I discovered that some particular ornaments of their dress used upon this occasion were regarded as charms, having power to prevent any fatal accidents, either in the chase or in their wars; but in the latter they now never engage. (Sauer, l. c., p. 272.)

In 1805 Langsdorff (vol. ii, p. 49) observed of the Kadiak natives that "the masks which earlier travelers observed these people to wear at their festivals seem now entirely laid aside.

the feathers are inserted the stems of nine semilunar bits of carved wood, of which one is figured on an enlarged scale, which are whitened and ornamented with a pattern of lines and dots. The presence of these appendages on this mask explains the purpose of the myriads of leaf-shaped and variously formed appendages which was discovered in the rubbish of the Unga rock-shelter. Taken by themselves, having lost all connection with their originals, most of which had become dust or so broken as to be unrecognizable, these little articles were incomprehensible.

Behind the disk of this maskette was a strong arch-shaped hoop, to which strips of skin from the neck of the winter reindeer, with the long hair attached, were fastened to form a sort of aureole or fringe. Three of the supports of the hoop project beyond the fringe, and to each is attached by a sinew-thread a leaf-shaped appendage. In use, these hang down and move with the motion of the wearer, but in the figure, for the sake of clearness, they are represented as pointing outward; one is represented on an enlarged scale. The attachment of such swinging or pendulous pieces to the head-dress, mask, or garment used in the dance was universal. The response of their motion to the swaying of the wearer's body in time with the tambourine in the dance was justly considered graceful and attractive, as was the swaying of the fringes and feathers.

## INNUIT MASKS FROM THE KUSKOKWIM RIVER.

No. 64241.—Dancing mask from the Innuit of the Kuskokwim River, collected by E. W. Nelson; nearly flat, circular, with white goose feathers inserted into holes around the outer edge, and supported behind by a small wooden hoop. The face, in the center, is regularly formed; the eyes, nostrils, and mouth perforated. The disk is 14 inches in diameter, exclusive of feathers. Mouth furnished with natural teeth, probably of a dog. Four rude animal heads, about 2 inches long, are inserted at equal distances from each other near the margin; a black circle is painted outside of the face. The groundwork of the mask is white; the relief around the face, the hair, etc., is colored a dull green, the outer edge of nostrils and a broad mustache, are black. Two hands, about 7 inches long, are pegged to the front outer margin; there is a hole through the center of each, and they are roughly colored red. The mask projects in relief about 3 inches.

No. 61244.—Kuskokwim River Innuit dancing mask, collected by Mr. E. W. Nelson. Disk of the mask about 8 inches in diameter. Margin fringed with deer hair, much destroyed by moths. Two hoops of wood exterior to the disk probably once supported a fringe of feathers. Five or six small wooden appendages, shaped like the blade of a pad-

dle, belong to it; these were originally pegged to the forehead forming a sort of arch over it, they are whitened. Relief of the disk black; the cheeks and around the eyes, white. Two large wooden appendages about 8 inches long, somewhat saber-shaped, are loosely fastened one on each side just outside the cheek. One eye circular with a dash of blue around it; the other, semi-lunar. Mouth wide, arched upward, center reamed out circularly, with an appendage like a beak about 2 inches long, one part above and one below this central perforation.

No. 64257.—Innuit dancing mask from the Kuskokwim River, collected by E. W. Nelson. Length, about 20 inches. Shape, oval. Disk somewhat concavely arched. At the lower end something rudely resembling a seal's head is attached, with two round projecting pegs, probably representing eyes. The disk as a whole is probably intended to represent a seal, or other animal, conventionalized. This part of the mask is blackened. The whole area of the back, with the exception of a margin about 1½ inches wide, is excavated and whitened. There are here represented, in the center, two eyes inclined downward at the inner corners, two oval nostrils, and a semi-lunar mouth, concave downward, with blackened wooden pegs for teeth. The eyebrows and a line over the nose, and another below the lower lip, are blackened. A rude face is represented in the upper portion by black lines. In the outer portion of the margin, are two large round holes nearly equi-distant from the ends and from each other. The interior of these holes is colored red. Owls' feathers are pegged into the outer margin at about four places on each side, and are supported by two hoops which are lashed to each other, to the lower pair of round holes in the margin, and also to a squarish hole at the upper end.

No. 30775.—Maskette found on the ice floating in the sea off Unalashka Island, having probably drifted from the Yukon River, or Kuskokwim River, on the ice. Disk elongated, about 22 inches long and 7 inches wide, broad and rounded at the lower end, tapering and truncated at the upper end. In the center a circular space is excavated, about 8 inches in diameter, in which is a face carved in relief, with perforated C shaped irides, the pupils of which are represented by circular bits of wood, supported by bits of wood not cut out. The mouth is semi-lunar, arched upward, with six teeth carved in the wood above and below. There are two pegs in the chin and two in each cheek. The hair was formerly blackened. The whole mask has the appearance of having been washed in a river or on the sea-shore, so that the coloration is mostly gone. Below the carved face (one on each side) are two round disks of tinned iron, about 1¼ inches in diameter, let into the wood, and having the appearance of eyes. The whole mask seems as if it was intended to represent the dorsal surface of a whale. To the outer margin large feathers were formerly pegged in, of which only the shafts remain.

No. 64216.—Maskette used by the Innuit of the Kuskokwim River,

collected by E. W. Nelson. This specimen considerably resembles, in most respects, No. 33109 (described above). It is, however, smaller, being about 14 inches in length over all; and the face carved on the body is covered by two small doors, hinged at the sides, which, when they are closed, conceal it—the body then appearing smoothly convex over its whole surface. When these little doors, which meet when closed and open in the middle, are opened, the face carved upon the body is made visible. The inside of these doors is painted with figures of reindeer and seals in black, on a white ground. The legs and arms attached to the disk are grooved on the front surface, reddened, and pegs resembling teeth stuck in at the edges of the groove.

This description of mask appears under a great many different forms. Sometimes the mask itself represents a face with a beak or other appendage attached to it; and the ears are represented by wing-like appendages, which move backwards and forwards, and are painted with figures of animals, as in the case just mentioned.

In other cases, the disk of the mask represents the body or the head of an animal, or in some cases the body of a fish. On the front surface of this, that is to say the back of the animal, similar little doors will be placed, which, when opened, disclose another face with gaping jaws, or some other unexpected carving. The variety is difficult to describe. Hardly any two of them are alike. Most of them are more or less ornamented with deer hair, feathers, seal's whiskers, or something of the kind, which, in many cases in the Museum specimens, has been lost or destroyed. The object of these appendages, such as doors or wings, is by opening them suddenly to give a surprise to the spectators during the course of the dances in which they are worn.

### FINGER MASKS.

No. 36236.—Finger mask from Chalitmut, Yukon delta, collected by E. W. Nelson. This is about 3 inches high, not including fringe. Disk circular, concavely excavated, surrounded by a narrow frame joined to the disk by four projections, the intervening spaces carved out. Central disk representing a round face with an obsolete nose, not perforated, mouth narrow, concavely arched upward, coloration white, margin surrounded with a fringe composed of a strip of skin from the reindeer's throat, with the long white hair attached to it.

No. 36231. Finger mask, collected by E. W. Nelson, in the south part of the Yukon delta, at the village of Kăng-ĕgik-nŏg-emūt. Disk circular connected by a narrow stem with the stall for the fingers. The whole, about 5½ inches long, exclusive of fringe. Fringe of deer hair, with two or three tail-feathers of the old squaw duck. Disk without a margin. The right eye brow forming a semicircle, or nearly so, with the bridge of the nose with which it is continuous. Beneath it is a semilunar perforation representing the eye. At the lower end of the ridge another perforation representing the nostrils. Mouth commencing on

the right side, curving to the left, a little downward, and then following the curve of the right margin upward to a point above the right eyebrow. There is no left eye or eyebrow.

No. 37130 (Plate XXVII, fig. 69).—Finger mask about 4 inches long, collected by E. W. Nelson on the Lower Kuskokwim River. A circular disk of 3 inches, connected with a T-shaped handle below, and no perforated finger-stall. Disk somewhat excavated, with narrow margin. Center occupied by a round face. The bottom of the groove separating the face from the margin is marked with a red line. The left eye, and the space around it, is concave; the eye semi-lunar and perforated. A single nostril is indicated, the outer point of which is somewhat turned up on the left side. The right eye is represented by a round, projecting peg. There is no right nostril. The mouth commences below the middle of the left eye, on the left side, and curves up over what would be the right cheek to a point midway between the peg which represents the right eye and the groove surrounding the face. The whole is carved in very slight relief. The margin is surrounded with a strip of deer skin, retaining the hair like the others, and one or two strips of bird's skin which formerly had the feathers upon them, to the end of which a single white feather is fastened. The workmanlike smoothness and artistic finish of the disk is poorly represented by the wood-cut, which has an appearance of rudeness not characteristic of the original.

## INNUIT MASKS FROM NORTON SOUND AND THE YUKON DELTA.

No. 33113.—From the Innuit of Norton Sound, Alaska; collected by E. W. Nelson; collector's number, 1428. A maskette of oval form, about 2 feet 2 inches over all in length, and 10 inches wide in the middle. The disk is about 14 inches in length, and apparently represents in the center a kyak with a deep groove, colored red, on each side of it, about 1½ inches wide, outside of which is the margin of the mask, whitened. The groove is set with pegs, resembling teeth, alternately placed, those on the inside alternating with those on the outside; there are about seven on each side. In the kyak, where the hole for the sitter would be, is represented a face in relief, with perforated eyes. Mouth and nostrils not perforated. The main groundwork of the whole mask is whitened; the outlines touched in in black. The mouth of the face is colored red; the nostrils and eyes black. Something resembling a beard is represented by dashes of black. The nostrils point nearly forward, and are circular. Above this face is a rectangular thin piece of wood about 4 inches long by 2½ high, fastened at the bottom somewhat in the manner of a sounding-board, and on it is represented the figure of a seal in black. At the top and bottom ends of the oval disk, under the bow and stern of the kyak, are represented two large hands, about 6

inches long by 5 inches wide, the fingers red, the palms of the hands white, with a black line across each. In the lower hand is represented the figure of a seal in wood, pegged on; this is whitened with an ash-colored back. Both hands are represented as nearly wide open.

No. 38857.—Dancing mask from the Yukon River; collected by E. W. Nelson; collector's number, 1620; obtained from the Innuit of Rasboinikskoi village; height of disk about 6 inches, somewhat oval, face carved in relief. Above the mouth and below the eyebrows it is whitened; the remainder is of a greenish color. The margin is marked with a red line inside and outside; between the lines it is of the natural color of the wood. Mouth large, arched downward, semi-lunar, eyes and mouth perforated, fringe composed of feathers pegged into the outer margin.

24334 (Plate XXVI, fig. 68).—Shamanic mask from Saint Michael's, Norton Sound, Alaska, collected for the National Museum by L. M. Turner. This broad shield-shaped mask or rather maskette is said to have been the property of a shamán and to symbolize a lynx or wild-cat. It is 17 by 13½ inches. The upper and lateral margins are ornamented by stiff feathers inserted into holes and secured by pegs; they are still further stiffened by a cord which passes from quill to quill fastened strongly to each and drawn taut between the feathers. To the middle of the upper margin part of the skin of a ptarmigan (*Lagopus albus*) is attached by a cord. It is in the brown summer plumage. Two little rude heads, intended for mink, are placed in the upper part of the mask, one at each corner. The face in the center is provided with pointed projecting ears, separately carved. One of the mink heads and one of the ears are represented on a larger scale in the figure as well as a section of the mask showing its relief. The face is whitened with some red stripes on it; the general field of the disk is greenish. The mouth is furnished with real teeth, perhaps of seals, set in, and a rudely carved paw is attached on each side of the face. The whiskers are represented by some small narrow feathers set in over the upper lip.

There are quite a number of such masks in the collection, that is of the same general character, and they are alleged to represent some mythical animal spirit which has appeared to the shaman during his solitary meditations.

It is to be hoped that when Mr. Nelson has recovered his health he will unravel for ethnologists the mysterious web of fact and fancy which veils to us the relations and uses of the Innuit masks. No one is perhaps so well qualified to do it, and it is certain that there is no existing collection which approaches in number or variety the assortment of these objects which the National Museum owes to his energy and sagacity.

24328 (Plate XXV, fig. 65).—Maskette resembling a seal's head, obtained from the Unaligmut Innuit at the village near Saint Michael's, Norton Sound, Alaska, by L. M. Turner. Dimensions, 10¾ by 7¼ inches.

This maskette is a fair representative of a very common type; its coloration is chiefly black and white and it has no perforations. It was doubtless attached to the head-dress and worn in one of the pantomimic dances. From this variety to the other, in which the face is distorted or a small human face looks out from the side of that of the animal, the distance is not great.

No. 30109.—Collected by E. W. Nelson, south of the Lower Yukon; collector's number, 1445. Innuit maskette over all about 18 inches in length, representing a figure with arms and legs extended and bent forward. The disk of the mask consists of the body of this figure, to which the head and neck, arms and legs of the figure are attached. These are also supported by a small wooden hoop in front, at a distance of about 2 or 3 inches from the body. The body of the mask is of a squarish form, beveled off to meet the neck and also to the attachments to the limbs. It is white. The central part of it circularly excavated. In the bottom of the excavation is a round face with perforated mouth and eyes. The edge around the face is colored red with round white spots, about ten in number, at nearly equal intervals. The face is white. The eyebrows are black and a black line passes around the eyes above and below and over the nose, like the frame of a pair of spectacles. There is a black line over each nostril. The nostrils themselves, a mustache (divided in the middle by a white line), and a sort of goatee—all these are black. The lips are red, mouth concave downward, without teeth, and nearly closed. The head has a long neck and an oval face, with ears and mouth red, dotted black mustache and eyebrows; black eyes, not perforated; and the usual black mark on the chin. The groundwork is whitened. The arms and legs of the first joint from the body, are white, surrounded by a black band, with a white spot on it. The distal joint of each limb is reddened, with a white spot. Something has, at one time, been pegged to the palm of each hand and to the ankle of each leg. Between the arm and the leg on each side, and nearest to the former, has been pegged in one feather, and a piece of wood rudely carved to represent a hand, fastened by the shaft of a feather so that it will move when the mask is shaken.

————————.—Innuit maskette probably from Norton Sound, without a number; collected by E. W. Nelson. Height of disk about 8 inches, diameter about 6, nearly flat, margin reddened, forehead of a bluish green, cheeks between eyebrows and mouth whitened. The right eyebrow reddened, also the mouth. A round hole in the center of the forehead, about three-quarters of an inch in diameter. The left eye represented by a similar round hole. The nose is curved to the right very strongly. No nostrils are represented. The right eye is represented (almost closed) by a curved perforation slightly concave upwards. In the center of the right cheek is a prominence, with a circular hole in it, and a nearly flat margin. The nose appears as if it was turned somewhat towards this prominence. The mouth is narrow, sharply pointed

to the left, with four short pegs representing teeth, is nearly below the nose, and perforated throughout the greater part of its length. At the right corner of the mouth is another circular perforation, with a red beveled margin, immediately beneath the perforation of the cheek, and about three-quarters of an inch in diameter. This has four pegs representing teeth in the upper part, and three in the lower part. It is evidently intended to represent a sort of supplementary mouth. This mask was held on by a deer-skin thong, which is still attached to it, and apparently went around the back of the head.

No. 38646 (Plate XXVII, fig. 70).—Innuit maskette, collected by E. W. Nelson at Big Lake, near Cape Rumiantsoff. It is of an oval shape, about 8 inches long, smaller at the upper end, with the left margin slightly concave, and the right margin considerably convex, rounded below and also above. The left eye arched upward, represented as nearly closed, the curve of the eyebrow forming nearly a semi-circle with the left side of the ridge of the nose. The nose is represented without nostrils. The right eye is represented nearly at right angles to the other, and as fully opened. It is also perforated. The outer angle points nearly upward. The eyebrow extends from a point about an inch above this perforation, curving slightly to the left, and then curving strongly to the left near the end of the nose. The mouth is represented as rounded at the left end, where it is also perforated with a nearly circular hole. It curves below the nose for a short distance, and then nearly parallel with the right side of the disk. It is reddened inside, and contains numerous pegs of uncolored wood, representing teeth. There is no perforation in the bottom of the groove representing the mouth, except the rounded one below the left eye. The general surface of this mask is not colored. According to Mr. Nelson, it is intended for use in some legendary festival.

## INNUIT MASKS FROM BERING STRAIT.

No. 64216.—Innuit maskette, collected by E. W. Nelson, at the Diomede Islands, Bering Strait. Maskette of a squarish-oval form, very rough; about 9 inches in length by 6 in width. Very roughly carved. Wood not smooth. Most of it is rubbed with a whitish earth. The upper portion of it, where the hair would be, is blackened. The upper half contains, below the two eyebrows, two narrow, nearly horizontal perforations for eyes, of which the right one is somewhat higher than the other, and between them a rough, irregularly carved projection representing the nose. Below this, and a little to the left, on the flat part of the face, are two perforations, somewhat resembling nostrils. A little further to the left, and below, is a perforation or slit representing the mouth, and nearly horizontal, except that the right end is turned

downward nearly at right angles. To the right of the nose, above described, and of the nostrils mentioned, below the right eye, is another similar nose, carved on what otherwise would be the right cheek. The whole carving is of the roughest and most ordinary description. It appears to have been held on by a thong, passing through two holes in the margin, just below the level of the eyes, one at each side.

### INNUIT MASKS FROM POINT BARROW, ARCTIC OCEAN.

No. 64230.—Mask used by the Arctic Innuit of Point Barrow, Alaska collected by E. W. Nelson. About 8 inches in length. Face about 5½ inches wide, and from tip to tip of the wings, about 19 inches. Mask of an oval form, rather convex, and carved rather thin. Much weather-beaten or washed. Represents very faithfully the features of the Innuit of Point Barrow. A black line crosses the face over the eyes, which are represented as nearly closed. The interior of the mouth is blackened, the lips are red, ornamented with teeth taken from seals and inserted in the upper and lower jaw of the mask. A black streak on the upper lip, and another on the chin, represent a moustache and a little goatee. A groove surrounds the disk of the mask, in which it is probable that a strip of reindeer heir, or cord, with feathers in it, was originally placed, but of which no portion remains. At each side of the mask is a triangular wing, the base extends from the level of the outer corner of the eye to the level of the outer corner of the mouth, and is hinged on with a cord, made of sinew, to the margin of the mask, so that it will move backward and forward. On these wings are represented figures of whales, birds, and a boat with people in it. They are drawn in black upon the clean surface of the wood. The upper margins of the wings are smooth and nearly horizontal. The lower margins are somewhat arched, and are ornamented with notches. The margin all around is reddened with red chalk, or similar coloring matter. The main body of this mask appears not to have been colored, or, if colored at all, to be merely rubbed with the white earth, to which reference has been made.

## ALEUTIAN MASKS.

As has elsewhere been stated the Aleuts or Unŭngŭn, protected and isolated by their insular habitat from an extremely distant period, seem to have developed in particular directions to a greater extent than any other known branch of the Innuit stem. This is especially evident in their language, religious exercises, and certain details of handiwork, such as embroidery, and grass-fiber weaving.

The early advent of bigoted and fanatical priests, whose promotion to a more congenial sphere depended in part on the number of converts and communicants they were able to report, aided by brutal and unsympathetic traders as masters of all, resulted in a total break-up of everything resembling their original state of culture, except such branches of it as related to hunting and daily labor.

For fifty years the Aleuts were treated as slaves. Hundreds of them were lost in long journeys at sea in their frail skin canoes. Their women were taken from them to serve the purposes of their brutal masters (being first baptized that lust might not be defiled by relations with paganism, a practice in vogue with some of the Russians in the Yukon region[1] as lately as 1867 to my personal knowledge). In every way they were ground to the earth. The priests when they came baptized them; subjected them to tithes; prohibited their festivals and pantomimic dances as heretical and blasphemous; taught them that their forefathers, being all pagans, were eternally damned, and that everything appertaining to them and their shamanism and other customs, as well as their very tombs and dead bodies savored of hell-fire. So thoroughly were they taught this lesson that to-day the ethnologist may rifle their fathers' graves in the sight of all, and the only emotion it excites in their minds is astonishment that any one will risk eternal torment by touching the accursed remains. About 1830 Veniaminoff came, and in seven years spread the gospel and taught the Aleuts for the first time that Christianity was not necessarily the symbol of things brutal, licentious, selfish, cruel, and depraved. The race had imbibed a sort of melancholy, in strange contrast to their original light-heartedness, and of this they have not yet shaken off the evidences. But, with a living example of love, care, piety, generosity and self-denial before them in the person of Veniaminoff, for seven years, a new life arose in the minds of the people. From the hunters they turned to the church for solace, æsthetic gratification, and leadership, and, as a peo-

[1] This knowledge refers not to the Aleuts who have all been "Christians" since 1830, but to wild Indians of the interior. It was formerly equally true of the Aleuts.

ple, have never swerved from this course. It is true they are very ignorant, and that many of the old superstitions are still secretly believed in, as among civilized folk, but, as a general statement, it may be said that the character and nature of their ancient rites are almost wholly extinguished from memory and entirely from actual practice, and have been for many years. With the present generation almost all that remains of the knowledge of these things will absolutely pass away. The idea that the knowledge of these things is sinful has been so persistently instilled into their minds that no passing stranger can induce them to reveal what they know. After some years pretty close intercourse a few hints have been dropped, or a few explanations vouchsafed, from time to time, but even then an inquiry would cause an immediate relapse into a wilful and stony ignorance in regard to anything of the sort. For this reason I can offer only a repetition of remarks which have been printed before[1] in various places touching their ceremonial use of masks. They had the usual method of dancing with masks on during the progress of several sorts of ceremonies, and added to that another practice, spoken of before as practiced in Mexico, namely, covering the face of the dead with a mask.

In 1840, in his "Notes on the Unalashka District," Father Veniaminoff wrote in regard to the Aleuts.

> Their original pantheism has entirely disappeared. Their songs and dances are now quite different from those described by the early voyagers. The idolatrous custom of dancing with masks on in their secret rites has passed away.

If the missionaries had sent the pantheistic paraphernalia as trophies to the Imperial Academy of Sciences, with a description of the details of the paganism they supplanted, their defects might be covered with the veil of charity, but, on the contrary, they destroyed on the spot everything they could get at, and even went so far as to rifle all conveniently situated tombs[2] and to destroy the carvings, masks, and relics

[1] *See* Alaska and its Resources. 8°. *Boston, Lee & Shepard*, 1870, pp. 388-390; *also*, Contributions to N. Am. Ethnology, vol. 1, pp. 89-91, 1875; *and* Remains of later prehistoric man obtained from caves (etc.), of the Aleutian Islands. 4°. Smithsonian Contributions to Knowledge, No. 318, *Washington*, 1878, pp. 28-32.

[2] Their only music is the tambour, to the beat of which the women dance. Their holidays, which are kept in the spring and autumn, are spent in dancing and eating. In the spring holidays they wear masks, neatly carved and fancifully ornamented. I believe that this constitutes some religious rite which, however, I could not persuade them to explain. I attribute this to the extraordinary and superstitious zeal of our illiterate and more savage priest, who, upon hearing that some of our gentlemen had seen a cave in their walks, where many carved masks were deposited, went and burnt them all. Not satisfied with this, he threatened the natives for worshiping idols, and, I believe I may say, *forced* many to be christened by him without being able to assign to them any other reason than that they might now worship the Trinity, pray to St. Nicholas and a cross which was hung about their necks, and that they would obtain whatever they asked for, adding that they must renounce the devil and all his works to secure them eternal happiness. It appeared to me that they regarded this as an insult; be that as it may, however, they were not pleased, but had not power to resent. (Account of the Aleuts of Unalashka in Sauer's Account of Billings' Voyage, 1792, p. 160; the masks are figured on Plate xi.)

they contained. Veniaminoff, as his books show, would have been more rational, but the mischief antedated his service in the district.

They were originally very fond of dances and festivals, which, on the whole, correspond pretty well with those of the Innuit and the people of the Sitkan Archipelago. These festivals, as among the continental Innuit, were chiefly held in the month of December. Whole villages were entertained by other villages. Successive dances of children, naked men beating drums (or rather tambourines), and of women curiously attired were followed by shamanic incantations and feasting.

If a whale was cast on shore the natives assembled with joyous and remarkable ceremonies. They advanced and beat tambourines of different sizes. The carcass was then cut up and a feast held on the spot. The dances had a mystic significance, some of the men were dressed in their most showy attire, and others danced naked in large wooden masks which came down to their shoulders, and represented various sea animals. They had religious dances and festivals in December. During these, images or idols, temporarily prepared, were carried from island to island, and strange ceremonies, of which we have only dim traditions, were performed in the night. There were mysteries sacred to the males, and others to the females. In some secret orgies both sexes joined without reproach. Hundreds of women wearing masks are said to have danced naked in the moonlight, men being rigidly excluded and liable to death if detected intruding. The men had analogous dances. An idea prevailed that while these mystic rites were going on a spirit or power descended into the idol. To look at or see him was death or misfortune, hence they wore large masks carved from drift-wood, with holes cut so that nothing before them or above them could be seen, but only the ground near their feet. After the dances were over idols and masks alike were broken up and cast into the sea. These masks were held by a cross-bar inside between the teeth and a loop passing over the head. They were different from those masks used in festivals not of a religious nature.

A further illustration of the same idea was shown in their practice of putting a similar mask over the face of a dead person when the body was laid in some rock-shelter. The departed one was supposed to be gone on his journey to the land of spirits, and for his protection against their glances he was supplied with a mask. For wealthy or important persons a particular process was employed to preserve the remains. The bodies were eviscerated, cleansed from fatty matters in running water, dried, and placed in wrappings of furs and fine grass matting. The bodies were usually doubled up, encased, and suspended above the ground in some place sheltered from the rain, as a cave or rock-shelter. It is stated, however, that sometimes the prepared body was placed in a life-like posture dressed and armed. They were represented as if engaged in some congenial occupation, such as hunting, fishing, or sewing. With them were also placed effigies of the animals they were supposed

to be pursuing, while the hunter was dressed in his wooden armor and provided with an enormous mask, all ornamented with feathers, seal vibrissæ, and tufts of hair, with a countless variety of wooden pendants colored in gay patterns. All the carvings were of wood; the weapons even were only fac-similes in wood of real weapons. Among the articles represented were drums, rattles, dishes, weapons, effigies of men, birds, fish, and mammals, and wooden armor.

I have elsewhere[1] given an account of my investigations in a cave or rock-shelter near the entrance to Delaroff Harbor, Unga Island, Shumagin Islands. M. Alphonse Pinart, has also published an account[2] of researches in the same vicinity, with figures of masks and other articles of which he was able to make a collection.

In 1868 Captain Riedell gave me a perfect mask from this locality (No. 7604), which I presented to the National Museum. Shortly afterward Dr. T. T. Minor, of the United States Revenue Marine, presented another (No. 7946), obtained at the same place. In 1871 the cave was visited by M. Pinart, who secured the cream of what was left, though leaving much that was valuable. In 1873 I was able to visit the cave in person, and collected everything worth having which remained, including one large and very perfect mask (No. 13002). These are here figured. Besides these, a very large number of fragments, halves of masks, and so on, were obtained. Most of them were of a cork-like consistency from great age, and were more or less broken or injured. So soft were they as to crumble under the brush used to remove loose dirt.

These masks were all different from one another in details, but made on one general type. They would average 14 inches high and (excluding the convexity) 10 or 12 in width. They were nearly all similar in having a broad, thick, but not flattened, nose, straight, flat eyebrows, thin lips, and a wide mouth, into which little wooden teeth were inserted. They also agreed in being painted in various colors, usually black and red, in having bunches of hair pegged in to indicate a beard, sometimes hair across the upper edge of the forehead, in being pierced only in the nostrils and mouth, and in having the ears large, flat, and usually pegged on much above the normal plane in human beings, generally at the upper posterior corners of the mask.

[1] Remains of later Prehistoric Man, etc., pp. 28–30.

[2] Pinart has issued an elegant publication, referring to this cave, which he entered in September, 1871, and has illustrated several masks and parts of masks in color. He seems to consider that there was a difference between masks placed over the dead, in which he includes those without a perforated mouth, and those which were worn by the mourners, which he believes to have been broken and thrown away at the time of the funeral ceremonies. However this may be, I have not heard it referred to by those from whom I have been able to obtain the few details I have given, and as I have never had an opportunity of comparing notes on this subject with M. Pinart, I must reserve my opinion. Certainly, I have found both kinds associated wi h the remains of the dead and the kind with perforated mouth much more common than the other sort, and all the unbroken ones I have seen were of this kind. (Cf. La caverne d'Aknañh, Isle d'Ounga, par A. L. Pinart. 4°. *Paris, Leroux*, 1875; and Comptes Rendus, 1875, tome 80, pp. 1032–1334.

Various curved lines were lightly chiseled or painted on the cheeks in many cases. A small round bar extended from side to side within. The ends, projecting through the mask below the corners of the mouth, look as if labrets were intended to be indicated, but this is a mere accident, as this sort of mask never has labrets and the ordinary kind exhibited only the median and not lateral labrets. The bar referred to was held in the teeth, as the marks of biting testify. Various holes about the edges were used for inserting feathers or little wooden pendants gaily painted. These masks exhibit great ingenuity and skill in carving, when we consider that it was all done with stone and bone tools. The nose, being the thickest portion, is longest preserved, and there must have been fifty such noses in the *débris* which covered the floor of the cave. Such shaped noses I have observed only once on masks not from Aleut caves. In that case the mask was one used in Shamanic ceremonial from the Nushagak River, Bristol Bay, collected by Mr. McKay.

The most remarkable thing about these masks is that they bear no resemblance whatever to the Aleutian physiognomy, though they agree very well in type among themselves. On the other hand, the masks for ordinary dances, not religious, are excellent illustrations of the Aleutian type of face. Thus, figure A, from Billings' voyage, is a thoroughly characteristic Aleutian face, and even the grotesque one figured by its side (B) is of the same natural type.

These dancing masks, like those of the Makah or Haida, are immensely variable and generally grotesque. None are found in any American museum, and none, unless in Russia, in the museums of Europe. They were all destroyed by the missionaries, and even those I have described from burial places owe their preservation to being in out-of-the-way places. The practice of putting a mask over the face of the dead seems not to have been universal, since no masks were found in the Kagamil cave, but under what circumstances they were used is not known, except that they have been found with adults from one end of the Archipelago to the other, when the bodies were placed in rock shelters. Those buried in the earth did not have masks, as far as known, nor have any been obtained from underground caves, properly so-called. It may be that the custom had something to do with the placing of the bodies in comparatively open places, not secure against the visits of malevolent spirits; but this is merely a speculation.

Plate XXVIII, fig. 71 (A).—Aleutian dancing mask, showing tiara of feathers, ear-pendants, and labret with plate and beads attached, obtained at Unalashka by Martin Sauer in 1792, while attached to Billings' expedition, and figured by him on plate xi of his account of that voyage, English edition.

Plate XXVIII, fig 72 (B and C).—Grotesque dancing mask from Unalashka, showing the cleat-shaped labret with a single pendant of beads attached, from the same source as the preceding. The outline C shows

a profile view of the labret, the lower part being that which was within the mouth. Beads were attached to the labret only or chiefly on ceremonial occasions.

13002 (Plate XXVIII, Fig. 73).—Aleutian death mask obtained in a rock-shelter, near the cave previously mentioned, where only a single body had been laid. The locality is near Delaroff Harbor, just outside the southeast point of entrance, Unga Island, Shumagin Group, Alaska. The original is 14 inches high and 13½ wide, excluding the convexity. The front and both profiles are shown. It will be observed that the two sides are not ornamented alike, and it may be added that, through exposure or pressure, the dead and corky wood has become somewhat warped. The original bears faint traces of red and green color.

7604 (Plate XXIX, Figs. 74).—Aleutian death mask obtained from the cave or rock-shelter of Aknaſih at Delaroff Harbor, by Capt. Charles Riedell, in 1868, and presented to the United States National Museum by W. H. Dall. The size of the original is 12¾ inches high and 10 inches wide, disregarding the convexity. Slight traces of color remain upon it. The right ear remains, but the other is lost. The teeth were represented by single pegs, inserted between the lips, across the middle of which a black line was drawn to separate, in appearance, the upper from the lower set of teeth.

7946 (Plate XXIX, Figs. 75).—Aleutian death mask from the same locality, presented to the United States National Museum in 1868 by Dr. T. T. Minor. It is 15¾ inches high by 10 wide, disregarding the convexity.

In all these masks the nostrils are pierced vertically, and the mouth horizontally. They were held in the mouth by a cross-bar between the teeth, which generally shows marks of biting. As the ends of this bar for greater strength are put clear through the mask, and are visible below and behind the outer corners of the mouth, they might in the figures be mistaken for an imitation of lateral labrets, which is not the intention. Most of them retain traces of red coloration, produced by red oxide of iron, which occurs in combination with clay, forming a sort of red chalk formerly much used for ornamentation before the whites introduced vermilion. The green coloration was produced by grinding up a kind of mycelium, of a bright green color (*Peziza*), which occurs in rotten birch wood; it was used either alone or in combination with a white chalky earth, to give it body. In the latter case it has a bluish tint in the green. Charcoal and oil were used for black, and the above white earth for white. Blue carbonate of copper, which is found on the Kuskokwim River, and is an article of trade with the tribes along the coast, and graphite from near Norton Sound were also used for coloring with, but were too rare to be had in most cases. The red bark of a resinous tree, perhaps the Sitka spruce or hemlock, was also used for coloring wooden articles; a bit of the bark being wet with saliva and rubbed on the clean fresh surface of the wood. The root of a plant

furnished a pale yellow, but this I have rarely seen. Perhaps it was not permanent. The root of the alder was, and still is, used for coloring deer-skins a beautiful red-brown, but I have never seen it applied to wooden ware or carvings.

Amber from the lignite beds was made into rude beads, and esteemed of extraordinary value. Other beads were made of bits of gypsum, shale, small hollow bones, cut in lengths, and variously colored bits of serpentine. I have never seen any nephrite or jadeite, which is not rare on the continent, especially near Norton Sound where there is a mine of it, and is much valued; but perhaps it was considered so very valuable as to escape the shell heap and the tomb.

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NOTE.—I take a last opportunity to insert here, out of its proper place, a piece of valuable information which has reached me since this paper was in type. I learn from M. Alp. Pinart, whose reputation as an ethnologist is world-wide, and who has recently spent six years on the Isthmus and in Central America, that the labret is still in use among the savage tribes from Darien to Honduras. It is worn only by the women, and is placed in the lower lip below the nose. The large labrets figured by Dampier have passed away; the women now wear (as among the Tlinkit) only a small button or a little silver pin. This fact fills quite a gap in the previously stated chain of evidence as to the distribution of labrets.

## SUMMARY AND SPECULATIONS.

It now remains to review the field and put the facts in orderly array in brief synopsis.

It appears that (on their discovery) we have the western coast of the Americas peopled by nations differing (as they still differ) in language, color, physique, æsthetic and mental development, morals, and social customs. The Peruvians, Botokudos, Mexicans, Pueblo people, Tinneh, Selish, Haida, Tlinkit, Innuit, Aleut, and Nutka may be mentioned. Many of these families or stocks are only partially located on the western coast; as, for instance, the Tinneh and Innuit. Yet the different branches of the family agree closely in language, physique, and most social customs, both on the west coast and elsewhere.

The original population of America is too distant to form the subject of discussion. There can be no doubt that America was populated in some way by people of an extremely low grade of culture at a period even geologically remote. There is no reason for supposing, however, that immigration ceased with these original people. Analogy would suggest that from time to time accessions were received from other regions, of people who had risen somewhat in the scale elsewhere, while the inchoate American population had been doing the same thing on their own ground. Be this as it may, we find certain remarkable customs or characteristics geographically spread, north and south, along the western slope of the continent in a natural line of migration with overflows eastward in convenient localities. These are not primitive customs, but things which appertain to a point considerably above the lowest scale of development in culture.

Some are customs pure and simple; *e. g.* labretifery; tattooing the chin of adult females; certain uses of masks, etc.

Some are characteristics of culture; *e. g.* a certain style of conventionalizing natural objects, and, in a higher stage, the use of conventional signs in a hieroglyphic way; a disposition to, and peculiar facility in, certain arts, such as carvings in wood, etc.

Some are details of art related to religious or mythological ideas, such as the repetition of elaborate forms in a certain attitude, with relation to myths therefore presumably similar in form or origin.

Some are similar myths themselves, a step further in the same retrospect.

If these were of natural American growth, stages in development out of a uniform state of culture, it might fairly be expected that we should find them either sporadically distributed without order or relation as between family* and family wherever a certain stage of culture had

* Used in the sense of stock, race, or stämme.

been reached or distributed in certain families wherever their branches were to be found. This we do not find.

The only other alternative which occurs to me is that these features have been impressed upon the American aboriginal world from without. If so, from whence?

Northern Asia gives us no help whatever. The characteristics referred to are all foreign to that region.

If nations from the eastern shores of the Atlantic were responsible, we should expect the Atlantic shores of America to show the results of the influence most clearly. This is not the case, but the very reverse of the case.

We are then obliged to turn toward the region of the Pacific.

The great congeries of islands known to geographers as Polynesia and Melanesia, stretch toward South America in latitude 25° south, as in no other direction. Here we have a stream of islands from Papua to the Paumotus, dwindling at last to single islets with wide gaps between, Elizabeth, Ducie, Easter Island, Sala-y-Gomez, San Felix, St. Ambrose, from which comparatively it is but a step swept by the northerly current to the Peruvian coast. We observe also that these islands lie south from the westerly south equatorial current, in the slack water between it and an easterly current and in a region of winds blowing toward the east.

Here, then, is a possible way.

I have stated how the peculiar and remarkable identity of certain carvings associated with religious rites turned my attention to the Melanesian Islands.

The customs, etc., I have called attention to, are, particularly, the use of masks and carvings to a more than ordinary degree, labretifery, human head preserving; identity of myths.

In Melanesia we have not yet found more than traces of labretifery, but if the speculations of ethnologists, that these and the African race had a common origin, have a reasonable foundation, we have in Africa, as I have shown in America, a wonderful development of this practice, which in that case might be due to a similar impulse from a parental locality.

In Melanesia, and to a less extent in Polynesia proper, we find the art of carving wonderfully developed, and (including New Zealand as a southern offshoot) thence on the suggested way we have the prehistoric carvings and inscribed tablets of Easter Island, the sculptures and picture-writing of Peru, Mexico, New Mexico, and Arizona, and the northwest coast, forming a nearly continuous series with local developments wholly or mostly different in detail and showing local style, but with a general agreement in fundamental character not elsewhere paralleled.

In his work on the geology of the provinces of Canterbury and Westland, Haast expresses (l. c., pp. 407–431) the opinion that New Zealand

was populated in quaternary times by an autochthonic race, who were the hunters of the moa, and who appear from their remains to have more or less resembled the Melanesian type. The Maori traditions include the idea of an older race who did not know the use of jade implements. The traditions of North Island Maoris place a race of wild men in the interior as do those of the people of Chatham Island. These were recognized as an older race by the Maories, and were dolichocephalic.

The people of Samoa, in deforming the head to make it more brachycephalic, are suggested by Kubary (Schmeltz, l. c., pp. 472–474) to have been originally actuated by a desire to conform their appearance to that of the higher, incoming, and conquering brachycephalic race which invaded these islands, and overcame the original dolichocephalic melanitic inhabitants. The chiefs and upper classes were held by pride from mixing with the women of the subject race, and their descendants show it in their purity of type as regards color, hair, and form. The commoner sort, however, probably were less continent in this respect, and therefore their descendants, proud of their ancestry on one side, but with the blood of the conquered element conspicuous in the longer shape of the head, sought by artificial means to modify this inheritance.

The Polynesian in its purity was a brachycephalic, conquering race. As now found, it has mixed with the lower and conquered long-headed people, and both have been more or less modified by contact, example, and intermarriages.

The features most akin to those to which on the western coast of America particular attention is now called are evidently related more to those of the Melanesians or predecessors of the true Polynesians than to the latter, except so far as the Polynesians have been modified by the customs of their forerunners. This would accord with the greater antiquity which the circumstances seem to imperatively require.

In Melanesia we find human heads more or less habitually preserved, painted, and ornamented; the same again in New Zealand, in Bolivia, in the interior of South America, in Mexico, and again on the northwest coast. Here again, be it not forgotten, modes and details are locally different, but the essential fact is the same. In the opposite direction we have it in Borneo, and in Africa also.

In Melanesia we find carved figures of a peculiar sort used in religious rites, or with a religious significance, and, strangely enough, two or more figures in a peculiar and unaccustomed attitude especially devoted to these purposes. Again, in Central America and Mexico, we meet the same attitude, and again on the rattle in the hand of the shaman on the northwest coast, and in the carvings on his head-dress and by his door.

In Melanesia we find social festivals celebrated with masks upon the face. We find the priest officiating in a mask, and masks hung up in the morai, or temple of the dead, and in memory of the dead. In Peru, in Mexico, on the northwest coast to the frozen borders of the icy sea,

we find parallel, and, in most cases, closely similar customs elaborately developed, with local omissions or additions, but the thing at bottom appears to be the same.

In Melanesia we yet know almost nothing of the mythology. As they have no sea eagles, they probably have no "thunder bird," but his voice is recognized, and his portrait drawn from Mexico to the Polar Sea in West America.

I have already shown how the custom of labretifery passes from tribe to tribe over ninety degrees of latitude, and I do not know how many linguistic stocks. The custom of tatooing lines on the chins of girls is a small thing, and widely spread. Perhaps it should be omitted from this series as not sufficiently exclusively West American. However, it prevails, or did prevail, from Melanesia to Peru, and from Mexico to the Arctic, on the lines we have traced.

Now, I have not a word in favor of any idea of common origin of the people possessing these characteristics. Taken within visible limits I consider it perfectly untenable. I believe, however, when we know our aborigines better we shall be more surprised by the points on which they agree than impressed, as we are now, by their remarkable differences.

But from my point of view these influences have been impressed upon people already developed to a certain, not very low, degree of culture. I have stated why I believe it to have come to the western Innuit since the chief and universal characteristics of that race, as a whole, were fixed and determined. I have mentioned how such a change may be seen in actual progress among the degenerate Tinneh on the Lower Yukon. The adoption by the Haida of the T'simpsian ritual and mythological or social dances described by Dawson, the same acquisition by the Makah from the Nittinats, related by Swan, are cases in point, though feeble ones.

Of course this influence has not been exerted without contact. My own hypothesis is that it was an incursion from Melanesia via Southeastern Polynesia which produced the impact; perhaps more than one. In all probability too, it occurred before either Melanesian, Polynesian, or American had acquired his present state of culture or his present geographical distribution.

The impulse communicated at one point might be ages in spreading, when it would probably be generally diffused in all directions; or more rapidly, when it would probably follow the lines of least resistance and most rapid intercommunication.

It is true that there is no such arrangement in savage society as that by which a fiat in Bond street determines that within six months every white man's head shall be roofed with a particular style of hat. Nevertheless communication among them is rapid, and in things they understand, or are interested in, faithful and effective, even between unfriendly tribes.

But, it may be said, these things are mere accidental coincidences; sporadic occurrences, from which no sound hypothesis can be drawn. This is the very question at issue, and I deny that such treatment of the subject is scientific. The suggestions here put forward may be all and singular erroneous; even some of the data may be assailed; but after getting the present interrogation points out of the way the question they merely indicate is as far from solution (if nothing else is done) as ever.

The mathematical probability of such an interwoven chain of custom and belief being sporadic and fortuitous is so nearly infinitesimal as to lay the burden of proof upon the upholders of the latter proposition.

Even were it acknowledged to be fortuitous it would still be the result of natural laws, and it would be interesting to inquire in such a case why these laws should work more effectively in a north and south than in any other direction, and what the circumstances are that produce a crop of labrets equally in Central Africa or in the Polar regions.

It has to me the appearance of an impulse communicated by the gradual incursion of a vigorous, masterful people upon a region already partly peopled by weaker and receptive races, whose branches, away from the scene of progressive disturbance, remained unaffected by the characteristics resulting from the impact of the invader upon their relatives.

It by no means follows on this view that these practices were imposed by conquerors on subjected tribes. On the contrary, people actually conquered, as in the case of Tlinkit slaves, would probably be denied such privileges as those symbols which were characteristic of their masters.

But people cognizant of the presence of a more vigorous or remarkably courageous race, from whom they could with difficulty defend themselves, and which was marked by certain particularly notable customs, unfamiliar and astonishing to those who first became acquainted with them, such as labretifery, might adopt customs with an idea that the desired courage or vigor might follow the symbol if adopted among themselves. The invaders would retain their original custom and conquer a place for themselves; the conquered would gradually disappear; the unconquered would exist in an intermittent sort of armed truce adjacent to the region of the conquerors; the custom would be propagated by mere contact with and high estimation of the qualities of the invaders by residents who remained unconquered.

Such a change was to a certain extent in actual progress within a recent period in the Yukon region. The Mahlemūt Innuit, the most bold and vigorous of the Orarian tribes of the region, would boldly carry their skin canoes over mountains, launch them on the other side and fearlessly invade the territory of the Tinneh Indians on the Lower Yukon, carrying on a trade in which the buyer dictated the prices. The miserable, though well-fed, Tinneh of this part of the river, constantly in fear of the more energetic coast tribes, have adopted (whether for this

or other reasons) the labret, the pipe, the foot-gear, tonsure, and dress of their alien superiors with slight modifications; practices and customs utterly unknown to the Tinneh of the upper river, bold, warlike, and enterprising, who would behold their unworthy relatives with utter scorn.

It is well known to those who have studied the region that the western slope, especially of Middle and North America, is a region of bounteous food supply, especially derived from the sea which washes it and the rivers which drain it.

The progress of conquest or armed migration, especially with people who subsist upon the country they are in, must be largely guided by the ability to find food. Any landfall of invaders on the western coast would be influenced in their movements by the presence of the Andes and the desert plains which border on the east the region of plenty near the shores. Migration in a northerly or southerly direction, either of the invaders or by those retreating before them, would be almost imperative except where the granaries of Middle America open the width of the continent to those who come, from whence to the nearer Antilles is but a step.

With its vast agricultural resources Squier has recognized in Central America an important center of aboriginal distribution. George Gibbs was confident that the region of Puget Sound—its creeks in season literally choked with salmon—was another. Indeed, the area from Puget Sound to Cape Spencer, though hardly to be termed *a center* on account of its extent, might be regarded as a sort of hive in which human swarms might continually be fed to maturity and issue forth.

The people of this region from the earliest times were known as the most vigorous, most warlike, most implacable, most subtile, most treacherous, most cultured, and fondest of blood for its own sake of any American tribes known to history. The decimated crew of Chirikoff's vessel, the first to touch on those shores, was a type of what many successive explorers suffered without having wronged the savages, and an example of a temper in the latter which even yet has hardly cooled.

It is, however, undesirable to carry these speculations beyond that point where they may excite investigation and inquiry, if not antagonism of a healthy kind, in the minds of others. I therefore bring them to a close.

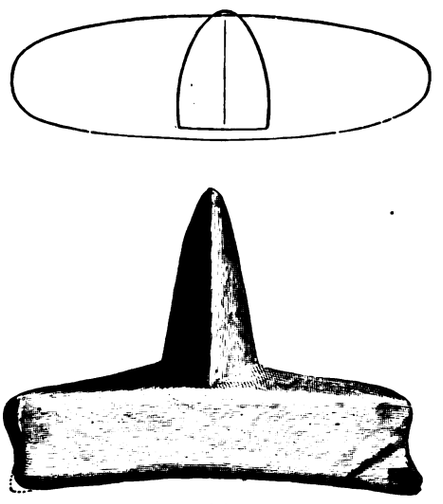
In terminating the discussion of this material I desire to express my obligations to Prof. S. F. Baird, Director of the National Museum, for facilities for study and inspection of material, and to Messrs. J. K. Goodrich, of the Museum, and J. C. Pilling, of the Bureau of Ethnology, for kind assistance in details bearing upon the preparation of this paper.

# EXPLANATION OF PLATES.

## PLATE V.

FIG. 1 (16139).—White marble labret, obtained from the uppermost layer of the shell heaps at Port Möller, Aliaska Peninsula, by W. H. Dall; (page 91).

FIG. 2 (16138).—Shale labret, from the same layer and locality; closely resembling the Tlinkit kalushka. Collected by W. H. Dall; (page 91).



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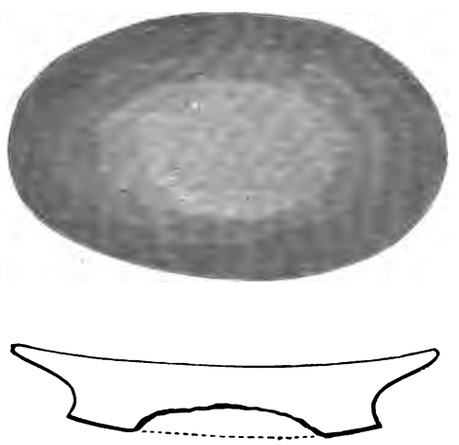

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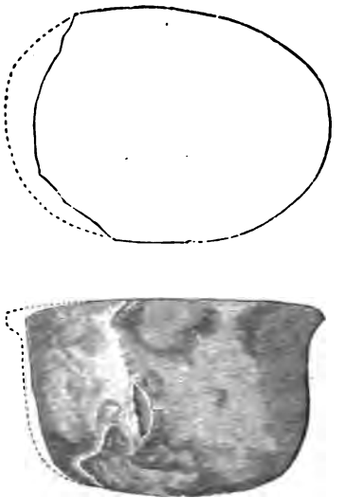
PREHISTORIC ALEUTIAN LABRETS.

## PLATE VI.

FIG. 3 (14933).—Ancient Aleut labret, from uppermost layer Amaknak cave, Unalashka Island. Collected by W. H. Dall; (page 91).

FIG. 4 (12991).—Another similar to the last, and from the same locality. Collected by W. H. Dall. These two are carved of walrus-tusk ivory. It is uncertain whether these were worn by males or females, as none such have been in use during the historic period; (page 91).



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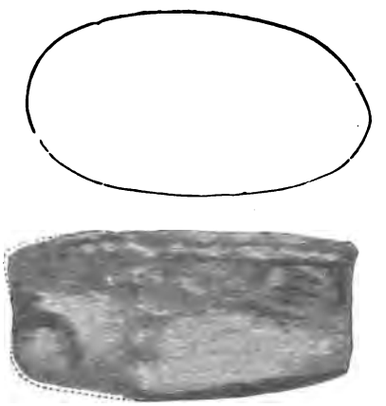

(12991)
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PREHISTORIC ALEUTIAN LABRETS.

## PLATE VII.

FIG. 5. Wooden maskoid from Mortlock Island, Caroline group, from a specimen on deposit in the American Museum of Natural History, New York City. Figured by permission of the director, Prof. A. S. Bickmore; (page 101).

FIG. 6. Same in profile. (Page 101).

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MASKOID FROM CAROLINE ISLANDS.

## PLATE VIII.

FIG. 7.—Profile view of a wooden maskette, from New Ireland, figured from a specimen deposited in the American Museum of Natural History, New York City. Figured with the permission of the director, Prof. A. S. Bickmore; (page 102).

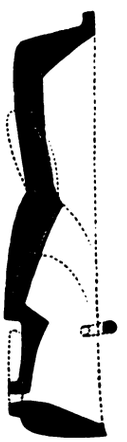
7

MASKETTE FROM NEW IRELAND.

## PLATE IX.

FIG. 8.—Front view of a wooden maskette, from New Ireland, near New Guinea, from a specimen in the American Museum of Natural History, New York City. Figured by permission of the director, Prof. A. S. Bickmore; (page 102).

FIGS. 9, 10 (20651).—Front view and section of a wooden maskette, from Levuka, Friendly Islands. Presented to the United States National Museum by H. S. Kirby; (page 101).



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MASKETTES FROM NEW IRELAND AND THE FRIENDLY ISLANDS.

## PLATE X.

FIGS. 11, 12.—Wooden maskoid carving, from New Ireland, near New Guinea, in the South Seas. Profile and front views showing the serpent biting the tongue of the effigy. From a specimen deposited in the American Museum of Natural History, New York City, and figured by the kind permission of the director, Prof. A. S. Bickmore; (page 102).

11 12

MASKOID FROM NEW IRELAND.

## PLATE XI.

FIG. 13.—Wooden mortuary maskoid, from the figure in E. G. Squier's Peru (page 90), found in a burial place at Pachecamac, Peru, and now forming part of the collection of the American Museum of Natural History, New York City. (This figure is inserted in the text, page 104.)

FIG. 14 (65376).—Similar maskoid, from near Lima, Peru; presented to the United States National Museum by G. H. Hurlbut; (page 104).

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MORTUARY MASKOID FROM PERU.

## PLATE XII.

FIG. 15 (22930).—Doll showing the mode of wearing, the maskette head-dress figured below it. Presented to the U. S. National Museum by Maj. J. W. Powell, who obtained it at the Moqui villages in Arizona; (page 105).

FIGS. 16, 17 (22942).—Front and rear of Moqui maskette head-dress used in dances at the Moqui villages. From a specimen in the U. S. National Museum. Collected by Maj. J. W. Powell as above; (page 105).

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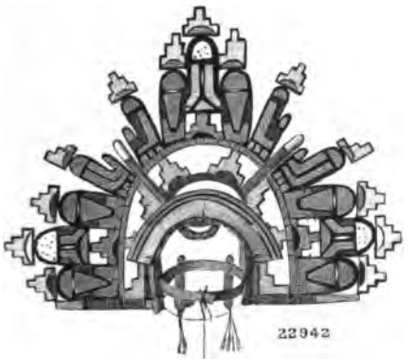


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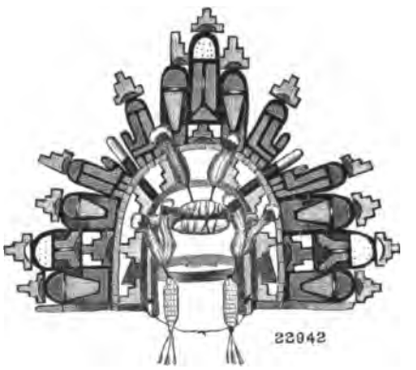


17

MOQUI MASKETTES FROM ARIZONA.

## PLATE XIII.

FIG. 18 (2659).—Mask from the northwest coast of America in the U. S. National Museum, collected by R. R. Waldron of the U. S. exploring expedition under Wilkes; (pages 109, 114).

FIG. 19.—Dancing mask used by the Makah Indians, of Cape Flattery, Washington Territory. From a figure by J. G. Swan; (page 107).

FIG. 20.—Another ditto; (page 107).

FIG. 21 (20578).—Dancing mask from Bella-bella, British Columbia, collected for the U. S. National Museum by J. G. Swan; (page 116).

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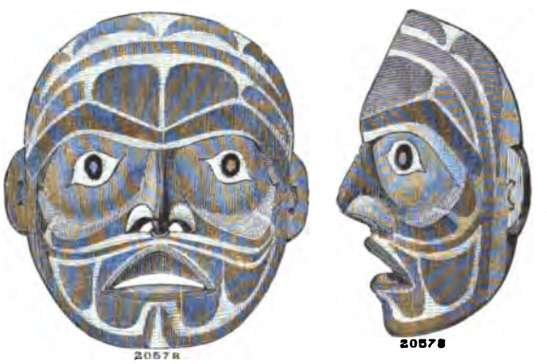

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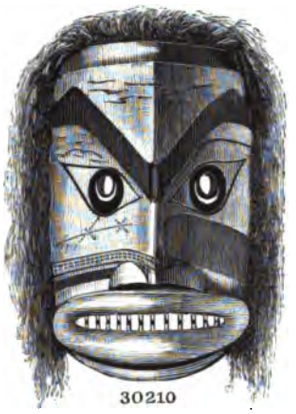
INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XIV.

FIGS. 22 (30210).—Dancing mask from Nutka Sound, Vancouver Island, collected for the U. S. National Museum by J. G. Swan, front and profile views; (page 117).

FIG. 23.—Dancing mask used by the Indians of Cape Flattery, Washington Territory. From a figure by J. G. Swan; (page 107).

FIG. 24 (2658).—Mask from the northwest coast of America, collected by Mr. Scarborough during the United States exploring expedition under Wilkes; (page 113).



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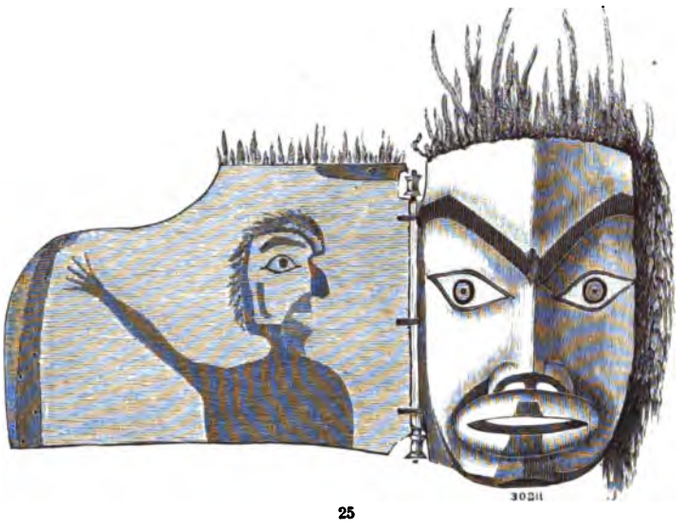
INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XV.

FIGS. 25–27 (30211).—Front and profile views, and diagram of lattice etc., of a dancing mask with movable wings (only one wing is shown), from Nutka Sound, Vancouver Island, collected by J. G. Swan, for the U. S. National Museum; (page 117)



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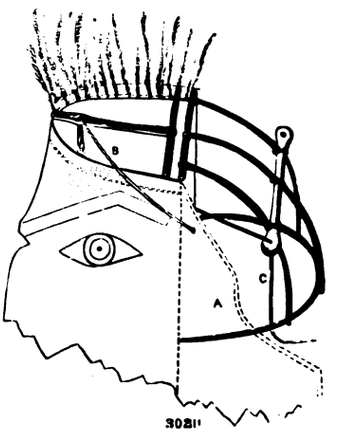


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INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XVI.

FIGS. 28, 29 (20570).—Front and profile views of dancing mask, representing a bird's head, with movable lower jaw; obtained for the U. S. National Museum from the Bella-bella Indians, British Columbia, by J. G. Swan; (page 115).

FIG. 30 (2714).—Dancing mask used by the Makah Indians, of Cape Flattery, Washington Territory; collected by J. G. Swan for the U. S. National Museum; (page 107).

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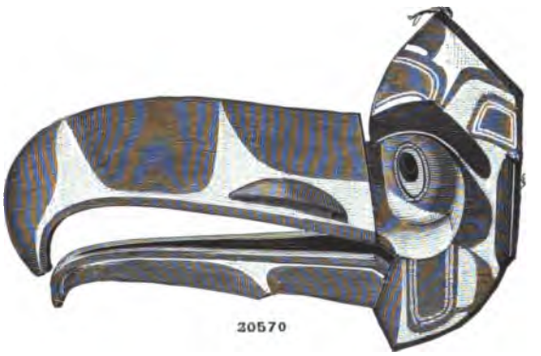


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INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XVII.

FIGS. 31, 32 (20892).—Dancing mask obtained from the Haida Indians of the Klemmahoon village, Prince of Wales Islands, Alaska, for the U. S. National Museum by J. G. Swan; (page 114).

FIGS. 33, 34 (30209).—Dancing mask representing a death's head used by the Nutka tribe of Indians at Barclay Sound, Vancouver Island; collected for the U. S. National Museum by J. G. Swan; (page 115).

FIG. 35 (1419).—Similar mask from the Makah Indians at Cape Flattery, Washington Territory; collected by J. G. Swan; (page 116).

FIGS. 36, 37 (2661).—Shamanic mask representing the "Thunder bird," obtained on the northwest coast of America by the U. S. exploring expedition under Wilkes; (page 119).

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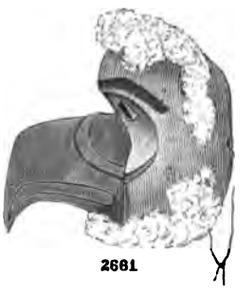

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INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XVIII.

FIGS. 38, 39 (23440).—Dancing helmet from the Makah Indians at Neeah Bay, Washington Territory; collected for the U. S. National Museum by J. G. Swan; (page 116).

FIG. 40.—Maskette representing a bird's head from the same locality as the preceding; from a figure by J. G. Swan; (page 107).

FIGS. 41, 42 (21573).—Haida (?) dancing mask; collected for the U. S. National Museum by Dr. White, U. S. A.; (page 115).

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INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XIX.

FIGS. 43, 44 (20890).—Dancing helmet of the Haida Indians; collected at the Klemmahoon village, Prince of Wales Islands, Alaska, by J. G. Swan for the U. S. National Museum; (page 116).

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INDIAN MASKETTE FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XX.

FIG. 45 (2666).—Dancing maskette, showing the mode of wearing the kalushka obtained (from the Haida Indians?) on the northwest coast of America during the U. S. exploring expedition under Wilkes; (page 119).

FIG. 46 (20581).—Dancing maskette, representing the face of a woman with a small kaluska, obtained from the T'simpsian Indians, of Port Simpson, British Columbia, for the U. S. National Museum by J. G. Swan; (page 118).

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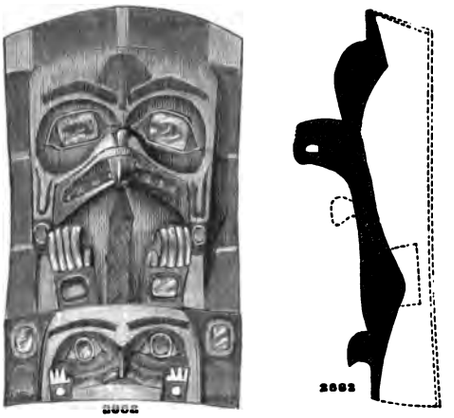
INDIAN MASKS FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XXI.

FIG. 47 (2662).—Front view and section of maskette collected on the northwest coast of America during the United States exploring expedition under Wilkes, by E. Very, U. S. N.; representing the beaver totem; (page 118).

FIG. 48 (9259).—Maskette representing the otter and frog, front and profile views, obtained from the Tlinkit Indians of Sitka by Dr. A. H. Hoff, U. S. A., for the U. S. National Museum; (page 118).



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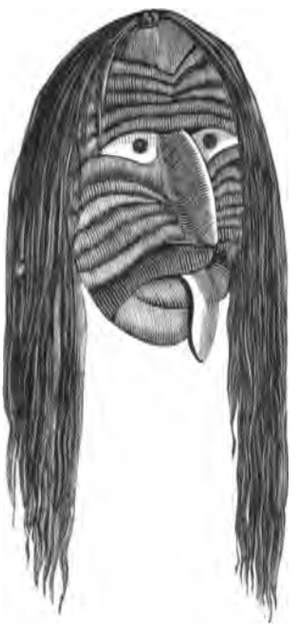
INDIAN MASKETTES FROM THE NORTHWEST COAST OF AMERICA.

## PLATE XXII.

FIG. 49.—Iroquois mask used by the order of "Falsefaces," from a figure by L. H. Morgan, in the Fifth Annual Report on the State Cabinet by the Regents of the University, Albany, 1852, p. 67; (page 144).

FIG. 50 (56470).—Shamanic rattle used by the Haida, from a specimen obtained by J. G. Swan at Port Townsend, W. T., from a Queen Charlotte Island Haida, showing the shaman, frog, and kingfisher with continuous tongues; (page 111).



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50

IROQUOIS MASK AND HAIDA MEDICINE-RATTLE.

## PLATE XXIII.

FIGS. 51–53 (20263).—Front and rear views and section of mask used by the Innuit of Prince William Sound, Alaska, presented to the U. S. National Museum by the Alaska Commercial Company; (page 126).

FIGS. 54–56 (20235).—Front, rear, and profile views of a mask used by the Innuit of Prince William Sound, Alaska, presented to the U. S. National Museum by the Alaska Commercial Company; (page 125).

FIGS. 57, 58 (16089).—Ivory carving, natural size, from the shell heaps of Port Möller, Aliaska Peninsula, collected by W. H. Dall for the U. S. National Museum, and figured for comparison with the preceding; (page 126).

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INNUIT MASKS FROM PRINCE WILLIAM SOUND.

## PLATE XXIV.

FIG. 59 (20266).—Mask used by the Innuit, of Prince William Sound, Alaska, presented to the U. S. National Museum by the Alaska Commercial Company; (page 128).

FIGS. 60, 61, 62 (20268). Front and rear views and restored lattice of Innuit mask from Prince William Sound, presented to the U. S. National Museum by the Alaska Commercial Company; (page 127).

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INNUIT MASKS FROM PRINCE WILLIAM SOUND.

## PLATE XXV.

FIGS. 63, 64 (20269).—Front and rear views of Innuit mask from Prince William Sound, Alaska, presented to the U. S. National Museum by the Alaska Commercial Company; (page 126).

FIG. 65 (20264).—Front view of Innuit mask from Prince William Sound, Alaska, presented to the U. S. National Museum by the Alaska Commercial Company; (page 127).

FIG. 66 (24328).—Maskette, representing a seal's head, obtained from the Innuit of Saint Michael's, Norton Sound, Alaska, for the U. S. National Museum by L. M. Turner; (page 133).

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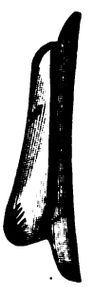

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INNUIT MASKS FROM PRINCE WILLIAM AND NORTON SOUNDS.

## PLATE XXVI.

FIG. 67 (16268).—Inunit maskette obtained at Saint Paul, Kadiak Island, Alaska, made by the Kaniagmut Innuit, and presented to the U. S. National Museum by W. H. Dall; (page 128).

FIG. 68 (24334).—Front view, section, and enlarged views of accessories of Innuit mask obtained at Saint Michael's, Norton Sound, Alaska, for the U. S. National Museum, by L. M. Turner; (page 133).

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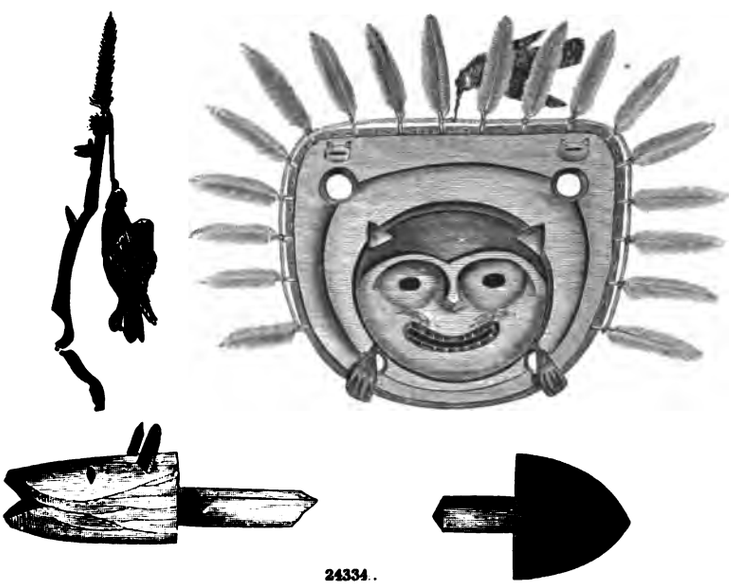

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INNUIT MASKS FROM KADIAK AND NORTON SOUND.

## PLATE XXVII.

FIG. 69 (37130).—Finger mask worn by the Innuit women on the forefinger during dances; collected for the U. S. National Museum, by E. W. Nelson, on the lower Kuskokwim River, Alaska; (page 132).

FIG. 70 (38646).—Innuit maskette worn during legendary pantomimic dances by the natives of the Yukon and Kuskokwim deltas; collected for the U. S. National Museum, at Big Lake, near Cape Rumiantsoff, by E. W. Nelson; (page 135).

(87130)
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(38646)
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INNUIT FINGER MASK AND MASKETTE.

## PLATE XXVIII.

FIG. 71 (A).—Aleutian dancing mask, used during social festivals among the Aleuts, showing the method of wearing the labret then in vogue. From a figure in Sauer's account of Billings' Voyage, plate xi, figure not numbered; 1792 (page 141).

FIG. 72 (B).—A grotesque mask used on similar occasions, showing the cleat-shaped labret described by early navigators. C indicates the same labret in profile. From a figure in Sauer's account of Billings' Voyage, plate xi, figure not numbered; (page 141).

FIG. 73 (13002).—Aleutian death mask, obtained from a rock shelter where the dead were laid, near Delaroff Harbor, Unga, Shumagin Islands, Alaska. Obtained and presented to the U. S. National Museum by W. H. Dall; front and both profiles shown; (page 142).

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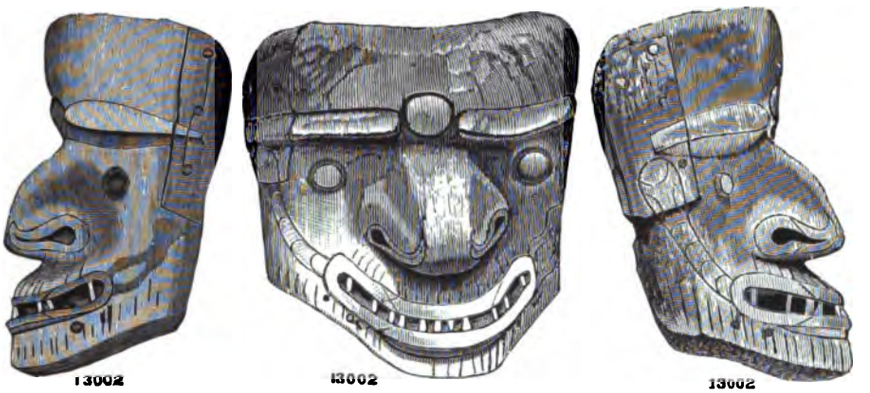


73

ALEUT DANCING AND MORTUARY MASKS.

## PLATE XXIX.

FIG. 74 (7604).—Aleutian death mask, from rock shelter, near Delaroff Harbor, Unga Island, Shumagin Islands, Alaska; collected by Capt. Charles Riedell, and presented to the U. S. National Museum by W. H. Dall; front and right profile views; (page 142).

FIG. 75 (7946).—Aleutian death mask, from the same locality; collected by Dr. T. T. Minor, U. S. R. M., and presented to the U. S. National Museum; front and left profile views; (page 142).

7604

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ALEUT MORTUARY MASKS.

SMITHSONIAN INSTITUTION——BUREAU OF ETHNOLOGY.

# OMAHA SOCIOLOGY.

BY

REV. J. OWEN DORSEY.

# OMAHA SOCIOLOGY.

By J. Owen Dorsey.

## CHAPTER I.

### INTRODUCTION.

§ 1. The Omaha Indians belong to the ₵egiha group of the Siouan family. The ₵egiha group may be divided into the Omaha-₵egiha and the Kwapa-₵egiha. In the former are four tribes, speaking three dialects, while the latter consists of one tribe, the Kwapas. The dialects are as follows: Pañka, spoken by the Ponkas and Omahas; Waɔaɔe, the Osage dialect; Ꝁaⁿze, that of the Kansas or Kaws, closely related to the Waɔaɔe; and Ugaqpa, or Kwapa.

§ 2. ₵egiha means, "Belonging to the people of this land," and answers to the Oto "Ꞁɔiwere," and the Iowa "Ꞁɔeꝁiwere." Mr. Joseph La Flèche, who was formerly a head chief of the Omahas, also said that ₵egiha was about equivalent to "Dakota." When an Omaha was challenged in the dark, when on his own land, he generally replied, "I am a ₵egiha." So did a Ponka reply, under similar circumstances, when on his own land. But when challenged in the dark, when away from home, he was obliged to give the name of his tribe, saying, "I am an Omaha," or, "I am a Ponka," as the case might be.

§ 3. The real name of the Omahas is "Umaⁿhaⁿ." It is explained by a tradition obtained from a few members of the tribe. When the ancestors of the Omahas, Ponkas, Osages, and several other cognate tribes traveled down the Ohio to its mouth, they separated on reaching the Mississippi. Some went up the river, hence the name Umaⁿhaⁿ, from ꝁímaⁿhaⁿ, "to go against the wind or stream." The rest went down the river, hence the name Ugáqpa or Kwápa, from ugáqpa or ugáha, "to float down the stream."

### EARLY MIGRATIONS OF THE ₵EGIHA TRIBES

The tribes that went up the Mississippi were the Omahas, Ponkas, Osages, and Kansas. Some of the Omahas remember a tradition that their ancestors once dwelt at the place where Saint Louis now stands; and the Osages and Kansas say that they were all one people, inhabiting an extensive peninsula, on the Missouri River.

On this peninsula was a high mountain, which the Kansas called Ma$^{n}$-daqpaye and Tce-dŭñga-ajabe; the corresponding Osage name be-Ma$^{n}$-ɻaqpaɕĕ.[1]

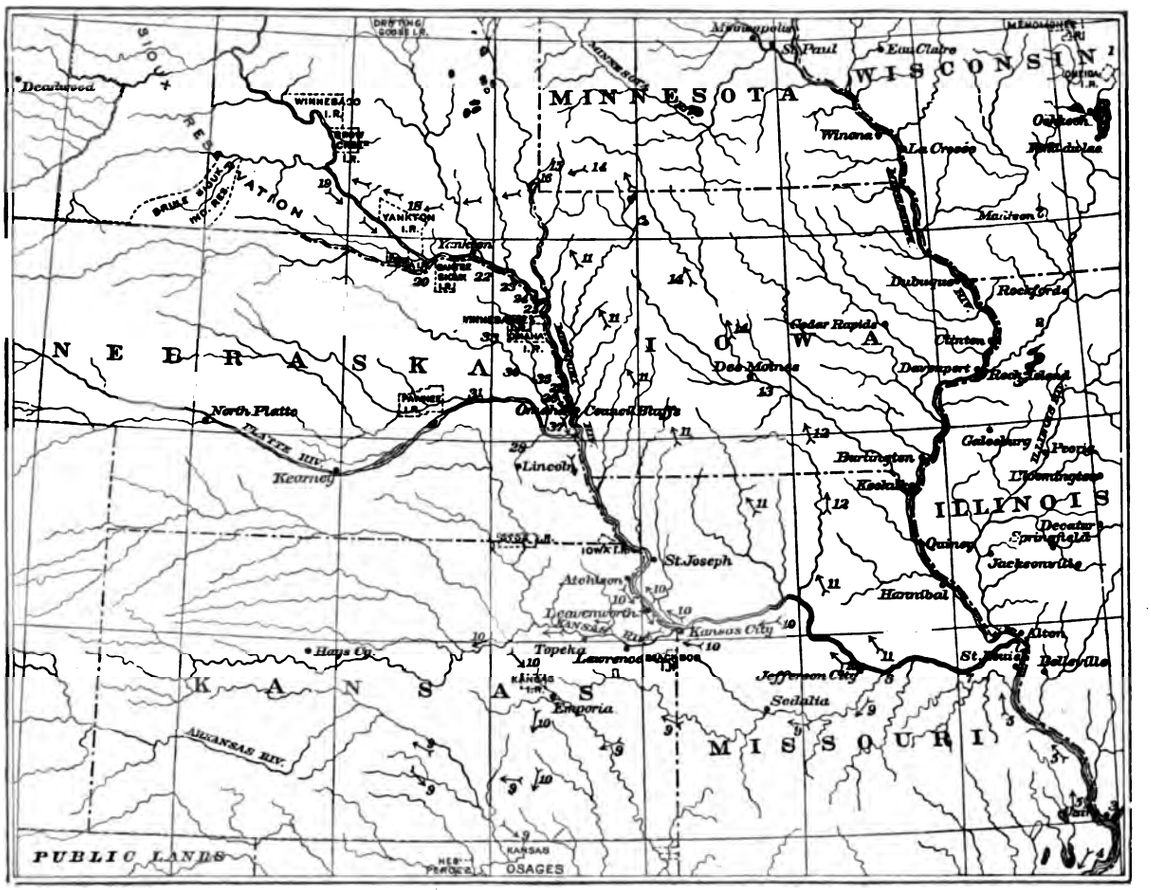
Subsequently, these tribes ranged through a territory, including Osage, Gasconade, and other adjacent counties of the State of Missouri, perhaps most of the country lying between the Mississippi and the Osage Rivers. The Iowas were near them; but the Omahas say that the Otos and Missouris were not known to them. The Iowa chiefs, however, have a tradition that the Otos were their kindred, and that both tribes, as well as the Omahas and Ponkas, were originally Winnebagos. A recent study of the dialects of the Osages, Kansas, and Kwapas discloses remarkable similarities which strengthen the supposition that the Iowas and Otos, as well as the Missouris, were of one stock.

At the mouth of the Osage River the final separation occurred. The Omahas and Ponkas crossed the Missouri and, accompanied by the Iowas, proceeded by degrees through Missouri, Iowa, and Minnesota, till they reached the neighborhood of the Red Pipestone quarry. This must have taken many years, as their course was marked by a succession of villages, consisting of earth lodges.

Thence they journeyed towards the Big Sioux River, where they made a fort. They remained in that country a long time, making earth lodges and cultivating fields. Game abounded. At that time the Yanktons dwelt in a densely wooded country near the head of the Mississippi; hence the Omahas called them, in those days, "Ja$^{n}$'aɻa ni'kaci$^{n}$ga, The people who dwelt in the woods." After that the Yanktons removed and became known as Yanktons. By and by the Dakotas made war on the three tribes, and many Omahas were killed by them. So at last the three tribes went west and southwest to a lake near the head of Choteau Creek, Dakota Territory, now known as Lake Andes (?). There they cut the sacred pole (see §§ 36 and 153), and assigned to each gens and subgens its peculiar customs, such as the sacred pipe, sacred tents, and the taboos. There were a great many gentes in each tribe at that time, far more than they have at present; and these gentes were in existence long before they cut the sacred pole.

After leaving the lake, known as "Waqɕéxe gasai' ɕa$^{n}$, Where they cut the sacred pole," they traveled up the Missouri River till they arrived at Ni-úgacúde, White Earth River. They crossed the Missouri,

[1] The writer was told by an Osage that Ma$^{n}$ɻaqpaɕĕ was at Fire Prairie, Missouri, where the first treaty with the Osages was made by the United States. But that place is on a creek of the same name, which empties into the Missouri River on the south, in T. 50 N., R. 28 W., at the town of Napoleon, Jackson County, Missouri. This could not have been the original Ma$^{n}$ɻaqpaɕĕ. Several local names have been duplicated by the Kansas in the course of their wanderings, and there are traces of similar duplications among the Osages. Besides this, the Omahas and Ponkas never accompanied the Kansas and Osages beyond the mouth of the Osage River; and the Kansas did not reach the neighborhood of Napoleon, Missouri, for some time after the separation at the mouth of the Osage River.




MAP SHOWING MIGRATIONS OF THE OMAHAS AND COGNATE TRIBES.

*Legend.*

1. Winnebago habitat.
2. Iowa habitat.
3. Arkansas habitat.
4. Kwapa habitat, after the separation from the Omahas, etc.
5. Route of the Omahas, Ponkas, Kansas, and Osages.
6. Their habitat at the mouth of the Missouri River.
7. Their course along that river.
8. Their habitat at the mouth of Osage River.
9. Subsequent course of the Osages.
10. Subsequent course of the Kansas.
11. Course of the Omahas and Ponkas, according to some.
12. Their course, according to others.
13. Where they met the Iowas.
14. Course of the three tribes.
15. Pipestone quarry.
16. Cliffs 100 feet high on each bank.
17. Fort built by the three tribes.
18. Lake Andes.
19. Mouth of White River.
20. Mouth of the Niobrara River.
22. Omaha village on Bow Creek.
23. Iowa village on Ionia Creek.
24. Omaha village ɟiɟañga jiñga and Zande buɟa.
25. Omaha village at Omadi.
26. Omaha village on Bell Creek.
27. Probable course of the Iowas.
28. Omaha habitat on Salt Creek.
30. Omaha habitat at Ane nat'ai ɕaⁿ.
31. Omaha habitat on Shell Creek.
33. Omaha habitat on the Elkhorn River.
35. Omaha habitat on Logan Creek.
37. Omaha habitat near Bellevue.

above this stream, and occupied the country between the Missouri and the Black Hills, though they did not go to the Black Hills.[2] After awhile, they turned down stream, and kept together till they reached the mouth of the Niobrara, where the Ponkas stopped. The Omahas and Iowas continued their journey till they reached Bow Creek, Nebraska, where the Omahas made their village, the Iowas going beyond till they reached Ionia Creek, where they made a village on the east bank of the stream, near its mouth, and not far from the site of the present town of Ponca.

By and by the Omahas removed to a place near Covington, Nebr., nearly opposite the present Sioux City. The remains of this village are now known as "ⱠI-ɻañ'ga-jiñ'ga," and the lake near by is called "ɸíx-ucpaⁿ-úgɕe," because of the willow trees found along its banks.

In the course of time the Iowas passed the Omahas again, and made a new village near the place where Florence now stands. After that they continued their course southward to their present reservation.

The Otos did not accompany the Ponkas, Omahas, and Iowas, when they crossed the Missouri, and left the Osages and others. The Otos were first met on the Platte River, in comparatively modern times, according to Mr. La Flèche.

## SUBSEQUENT MIGRATIONS OF THE OMAHAS.

§ 4. After leaving ⱠI-ɻañga-jiñga, where the lodges were made of wood, they dwelt at Zandé búɻa.

2. Taⁿ'waⁿ-ɻañ'ga, The Large Village, is a place near the town of Omadi, Nebr. The stream was crossed, and the village made, after a freshet.

3. On the west side of Bell Creek, Nebraska.

4. Thence south to Salt Creek, above the site of Lincoln.

5. Then back to Taⁿwaⁿ-ɻañga. While the people were there, Aⁿba-hebe, the tribal historian was born. This was over eighty years ago.

6. Thence they went to Áne-nát'ai ɕaⁿ, a hill on the west bank of the Elkhorn River, above West Point, and near Bismarck.

7. After five years they camped on the east bank of Shell Creek.

8. Then back to Taⁿwaⁿ-ɻañga, on Omaha Creek.

9. Then on the Elkhorn, near Wisner, for ten years. While there, Aⁿba-hebe married.

10. About the year 1832–'3, they returned to Taⁿwaⁿ-ɻañga, on Omaha Creek.

11. In 1841 they went to Taⁿ'waⁿ-jiñgá ɕaⁿ, The Little Village, at the mouth of Logan Creek, and on the east side.

[2] A Ponka chief, Buffalo Chips, said that his tribe left the rest at White Earth River and went as far as the Little Missouri River and the region of the Black Hills. Finally, they returned to their kindred, who then began their journey down the Missouri River. Other Ponkas have told about going to the Black Hills.

12. In 1843, they returned to Ta$^{a}$wa$^{a}$-ɻañga.

13. In 1845 they went to a plateau west of Bellevue. On the top of the plateau they built their earth lodges, while the agency was at Bellevue.

14. They removed to their present reserve in 1855.

## PRESENT STATE OF THE OMAHAS.

§ 5. Their reservation was about 30 miles in extent from east to west, and 18 or 20 from north to south. It formed Black Bird County. The northern part of it containing some of the best of the timber lands, was ceded to the Winnebagos, when that tribe was settled in Nebraska, and is now in Dakota County. The southern part, the present Omaha reservation, is in Burt County. The Omahas have not decreased in population during the past twenty-five years. In 1876 they numbered 1,076. In 1882 there are about 1,100. Most of the men have been farmers since 1869; but some of them, under Mr. La Flèche, began to work for themselves as far back as 1855. Each man resides on his claim, for which he holds a patent given him by the Bureau of Indian Affairs. Many live in frame houses, the most of which were built at the expense of their occupants.

## CHAPTER II.

### THE STATE.

§ 6. "A state," said Maj. J. W. Powell, in his presidential address to the Anthropological Society of Washington, in 1882, "is a body politic, an organized group of men with an established government, and a body of determined law. In the organization of societies units of different orders are discovered." Among the Omahas and other tribes of the Siouan family, the primary unit is the gens or clan, which is composed of a number of consanguinei, claiming descent from a common ancestor, and having a common taboo or taboos. But starting from the tribe or state as a whole, we find among the Omahas two half-tribes of five gentes each, the first called "Hañga-cenu," and the second, "Icta-sanda." (See § 10.) These half-tribes do not seem to be phratries, as they do not possess the rights of the latter as stated by Morgan: the Hañga-cenu gentes never meet by themselves apart from the Icta-sanda gentes.

Next to the half-tribes are the gentes, of which the Omahas have ten. Each gens in turn is divided into "uɴiguasne," or subgentes. The number of the latter varies, at present, according to the particular gens; though the writer has found traces of the existence of four subgentes in each gens in former days. The subgentes seem to be composed of a number of groups of a still lower order, which are provisionally termed "sections." The existence of sections among the Omahas had been disputed by some, though other members of the tribe claim that they are real units of the lowest order. We find among the Titoⁿwaⁿ Dakotas, many of these groups, which were originally sections, but which have at length become gentes, as the marriage laws do not affect the higher groups, the original phratries, gentes, and subgentes.

The Ponka chiefs who were in Washington in 1880, claimed that in their tribe there used to be eight gentes, one of which has become extinct; and that now there are ten, three subgentes having become gentes in recent times. According to Mr. Joseph La Flèche, a Ponka by birth, who spent his boyhood with the tribe, there are but seven gentes, one having become extinct; while the Wajaje and Nuqe, which are now the sixth and seventh gentes, were originally one. For a fuller discussion of the gentes see the next chapter.

The state, as existing among the Omahas and cognate tribes, may be termed a kinship state, that is, one in which "governmental functions are performed by men whose positions in the government are determined by kinship, and rules relating to kinship and the reproduction of

the species constitute the larger body of the law. The law regulates marriage and the rights and duties of the several members of a body of kindred to each other. Individuals are held responsible," chiefly "to their kindred; and certain groups of kindred are held responsible," in some cases, "to other groups of kindred. When other conduct, such as the distribution of game taken from the forest or fish from the sea, is regulated, the rules or laws pertaining thereto involve the considerations of kinship," to a certain extent. (See Chapter XII, § 303.)

## DIFFERENTIATION OF ORGANS IN THE STATE.

§ 7. The legislative, executive, and judicial functions have not been differentiated. (See Government, Chapter XI.)

Whether the second mode of differentiation has taken place among the Omahas, and just in the order described by Major Powell, is an open question. This mode is thus stated: "Second, by the multiplication of the orders of units and the specialization of the subordinate units so that subordinate organizations perform special functions. Thus cities may be divided into wards, counties into towns." Subgentes, as well as gentes, were necessary among the Omahas for marriage purposes, as is shown in §§ 57, 78, etc. The recent tendency has been to centralization or consolidation, whereas there are strong reasons for believing that each gens had four subgentes at the first; several subgentes having become few in number of persons have been united to the remaining and more powerful subgentes of their respective gentes.

The third mode of differentiations of organs in the State is "by multiplication of corporations for specific purposes." The writer has not yet been able to find any traces of this mode among the Omahas and cognate tribes.

§ 8. Two classes of organization are found in the constitution of the State, "those relating directly to the government, called major organizations, and those relating indirectly to the government, called minor organizations." The former embraces the State classes, the latter, corporations.

## STATE CLASSES.

These have not been clearly differentiated. Three classes of men have been recognized: Níkagáhi, wanáce, and cénujiñ'ga.

In civil affairs, the nikagahi are the chiefs, exercising legislative, executive, and judicial functions. They alone have a voice in the tribal assembly, which is composed of them. The wanace, policemen, or braves, are the servants or messengers of the chiefs, and during the surround-

ing of a herd of buffalo, they have extraordinary powers conferred on them. (See §§ 140 and 297.)

The cenujiñga, or young men, are the "common people," such as have not distinguished themselves, either in war or in any other way. They have no voice in the assembly, and during the buffalo hunt they must obey the chiefs and wanace.

In religious affairs, which are closely associated with civil ones, we find the chiefs having a prominent part. Besides the chiefs proper are the seven keepers of the sacred pipes, or pipes of peace (see §§ 14–19, 287, 296), and the keepers of the three sacred tents (see §§ 13, 22–24, 36, 295). The functions of these keepers of the sacred tents, especially those of the two Hañga men, appear to be both religious and civil. Of these two men, ⊿a¢iⁿ-naⁿpajĭ said: "The two old men, Waka$^{n'}$-maⁿ¢iⁿ and ⊥e-ha$^{n'}$maⁿ¢iⁿ, are the real governors of the tribe, and are counted as gods. They are reverenced by all, and men frequently give them presents. They mark the tattooed women." Frank La Flèche denied this, saying that these two old men are the servants of the Hañga chief, being only the keepers of the sacred tents of his gens. J. La Fléche and Two Crows said that while there were some "níkaci$^{n'}$ga qubé," sacred or mysterious men, among the Omahas, they did not know who they were. Some of the chiefs and people respect them, but others despise them. It is probable that by nikaci$^{n'}$ga qube, they meant exorcists or conjurers, rather than priests, as the former pretend to be "qube," mysterious, and to have supernatural communications.

There is no military class or gens among the Omahas, though the Ponka ¢ixida gens, and part of the Nikadaona gens are said to be warriors. Among the Omahas, both the captains and warriors must be taken from the class of cenujiñga, as the chiefs are afraid to undertake the work of the captains. The chiefs, being the civil and religious leaders of the people, cannot serve as captains or even as subordinate officers of a war party. Nor can they join such a party unless it be a large one. Their influence is exerted on the side of peace (see §§ 191, 292), and they try to save the lives of murderers. (See § 310.) They conduct peace negotiations between contending tribes. (See §§ 220, 292.)

All the members of a war party, including the captains, lieutenants, and wanace, as well the warriors, are promoted to the grade or class of (civil) wanace on their return from battle. (See § 216.)

### SERVANTS.

There are no slaves; but there are several kinds of servants called wagáq¢aⁿ. In civil and religious affairs, the following are wagáq¢aⁿ. The two keepers of the Hañga sacred tents are the servants of the Hañga chief. (See above, § 295, etc.) One of these old men is always the servant of the other though they exchange places. (See § 151.) The keepers of the sacred pipes are the servants of the chiefs. (See §§ 17–19). The ¢atada Quꝥa man is the servant of the keepers of the

sacred tents. (See § 143.) Some of the Wasabe-hit'ajĭ men are servants of the Wejiⁿcte gens, acting as such in the sacred tent. (See §§ 23, 24.) Some of the Iñke-sabĕ men are the servants of the Hañga when they act as criers (see §§ 130, 136, etc.), and so is a ꞩaⁿze man (§ 152). The wanace are the servants of the chiefs. The wagɬa or messengers acting as criers for a feast are the servants of the giver of the feast for the time being.

In military affairs, the following are servants: The men who act as wagɬa for the preliminary feast; the men who carry the baggage of the captains and wait on them; the bearer of the kettle; the bearers of the sacred bags when there is a large party; the special followers of each captain, including his lieutenant, the followers or warriors being about equally divided between the captains; and the wanace or policemen. (See War Customs, Chapter IX.)

Social classes are undifferentiated. Any man can win a name and rank in the state by becoming "wacuce," or brave, either in war or by the bestowal of gifts and the frequent giving of feasts. (See § 224.)

## CORPORATIONS.

Corporations are minor organizations, which are indirectly related to the government, though they do not constitute a part of it.

The Omahas are organized into certain societies for religious, industrial, and other ends. There are two kinds, the Ikágekíɬĕ or brotherhoods, and the Ûkikuneɬĕ, or feasting organizations. The former are the dancing societies, to some of which the doctors belong. A fuller description of them will be found in Chapter X.

The industrial organization of the state will be discussed in Chapters VII, VIII, IX, X, and XI.

# CHAPTER III.

## THE GENTILE SYSTEM.

### TRIBAL CIRCLES.

§ 9. In former days, whenever a large camping-ground could not be found, the Ponkas used to encamp in three concentric circles; while the Omahas, who were a smaller tribe, pitched their tents in two similar circles. This custom gave rise to the name "Oyate yamni," The Three Nations, as the Ponkas were styled by the Dakotas, and the Omahas became known as the Two Nations. But the usual order of encampment has been to pitch all the tents in one large circle or horseshoe, called "hú¢uga" by the Indians. In this circle the gentes took their regular places, disregarding their gentile circles, and pitching the tents, one after another, within the area necessary for each gens. This circle was not made by measurement, nor did any one give directions where each tent should be placed; that was left to the women.

When the people built a village of earth-lodges, and dwelt in it, they did not observe this order of camping. Each man caused his lodge to be built wherever he wished to have it, generally near those of his kindred. But whenever the whole tribe migrated with the skin tents, as when they went after the buffaloes, they observed this order. (See § 133.)

Sometimes the tribe divided into two parties, some going in one direction, some in another. On such occasions the regular order of camping was not observed; each man encamped near his kindred, whether they were maternal or paternal consanguinities.

The crier used to tell the people to what place they were to go, and when they reached it the women began to pitch the tents.

### THE OMAHA TRIBAL CIRCLE.

§ 10. The road along which they passed divided the tribal circle into two equal parts; five gentes camped on the right of it and five pitched their tents on its left. Those on the right were called the Hañgacenu, and the others were known as the Ictasanda. The Hañgacenu gentes are as follows: Wéji$^{n}$cte, Iñké-sábĕ, Hañ'ga, ¢átada, and ꓘa$^{n}$'ze. The Ictasanda gentes are as follows: Ma$^{n}$'¢iñka-gáxe, ⊥e-sĭn'de, ⊥a-dá, Iñg¢é-jide, and Ictásanda.

According to Waha$^{n}$-¢iñge, the chief of the ⊥e-sĭnde gens, there used

to be one hundred and thirty-three tents pitched by the Haĩgacenu, and one hundred and forty-seven by the Ictasanda. This was probably the case when they went on the hunt the last time, in 1871 or 1872.

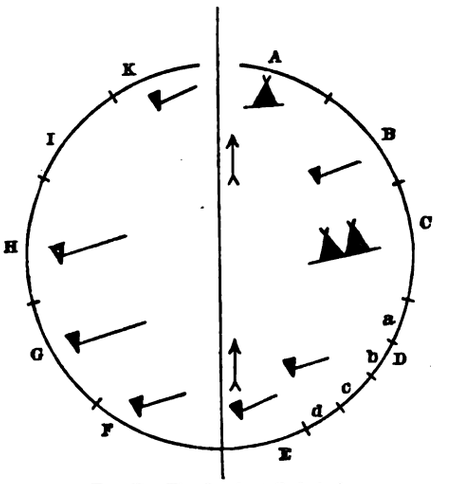



FIG. 72.—The Omaha tribal circle.

LEGEND.

HAÑGACENU GENTES.

A. Wejiⁿcte, or Elk.
B. Iñke-sabĕ.
C. Haĩga.
D. ₵atada:
  *a*. Wasabe-hit'ajĭ.
  *b*. Wajiñga-₵atajĭ.
  *c*. ⅄e-da-it'ajĭ.
  *d*. ⅄e-'iⁿ.
E. ⅄aⁿze.

ICTASANDA GENTES.

F. Mañ₵iñka-gaxe.
G. ⅄e-sĭnde.
H. ⅄a-da.
I. Iñg₵e-jide.
K. Ictasanda.

The sacred tents of the Wejiⁿcte and Haĩga gentes are designated by appropriate figures; so also are the seven gentes which keep the sacred pipes. The diameter of the circle represents the road traveled by the tribe, A and K forming the gentes in the van.

### RULES FOR PITCHING THE TENTS.

§ 11. Though they did not measure the distances, each woman knew where to pitch her tent. Thus a ⅄aⁿze woman who saw a Wejiⁿcte tent set up, knew that her tent must be pitched at a certain distance from that part of the circle, and at or near the opposite end of the road or diameter of the circle. When two tents were pitched too far apart one woman said to the other, "Pitch the tent a little closer." Or, if they were too close, she said, "Pitch the tent further away." So also if the tents of neighboring gentes were too far apart or too close together. In the first case the women of one gens might say, "Move along a little, and give us more room." In the other they might say, "Come back a little, as there is too much space between us." When the end gentes, Wejiⁿcte and

Ictasanda, were too far apart there was sometimes danger of attacks of enemies. On one occasion the Dakotas made a dash into the very midst of the circle and did much damage, because the space between these two gentes was too great. But at other times, when there is no fear of an attack, and when the women wish to dress hides, etc., the crier said: "Halloo! Make ye them over a large tract of land." This is the only occasion when the command is given *how* to pitch the tents.

When the tribe returned from the hunt the gentes encamped in reverse order, the Wejiⁿcte and Ictasanda gentes having their tents at the end of the circle nearest home.

There appear indications that there were special areas, not only for the gentes, but even for the subgentes, all members of any subgens having their lodges set up in the same area. Thus, in the Iñke-sabĕ gens, there are some that camped next the Wejiⁿcte, and others next the Hañga; some of the Hañga camped next the Iñke-sabĕ, and others next the ɸatada, and so on. (See §73.)

§ 12. Within the circle were placed the horses, as a precaution against attacks from enemies. When a man had many horses and wished to have them near him, he generally camped within the circle, apart from his gens, but this custom was of modern origin, and was the exception to the rule.

## THE SACRED TENTS.

§ 13. The three sacred tents were pitched within the circle and near their respective gentes: that of the Wejiⁿcte is the war tent, and it was placed not more than 50 yards from its gens; those of the Hañga gens are connected with the regulation of the buffalo hunt, etc.; or, we may say that the former had to do with the protection of life and the latter with the sustenance of life, as they used to depend mainly on the hunt for food, clothing, and means of shelter.

## THE SACRED PIPES.

§ 14. All the sacred pipes belong to the Hañga gens, though Hañga, in ancient times, appointed the Iñke-sabĕ gens as the custodian of them. (J. La Flèche and Two Crows.) The Iñke-sabĕ gens, however, claims through its chief, Gahige, to have been the first owner of the pipes; but this is doubtful. There are at present but two sacred pipes in existence among the Omahas, though there are seven gentes which are said to possess sacred pipes. These seven are as follows: Three of the Hañgacenu, the Iñke-sabĕ, ɸatada, and ꓘaⁿze, and four of the Ictasanda, the Maⁿɸiñka-gaxe, ꓶe-sĭnde, ꓶa-da, and Ictasanda.

The two sacred pipes still in existence are kept by the Iñke-sabĕ gens. These pipes are called "Niniba waqūbe," Sacred Pipes, or "Niniba jide," Red Pipes. They are made of the red pipestone which is found in the famous red pipestone quarry. The stems are nearly flat and are worked near the mouth-piece with porcupine quills.

### GAHIGE'S ACCOUNT OF THE TRADITION OF THE PIPES.

§ 15. Gahige, of the Iñke-sabĕ gens, said that his gens had the seven pipes at the first, and caused them to be distributed among the other gentes. He named as the seven gentes who had the pipes, the following: 1. Iñke-sabĕ; 2. ⅃e-da-it'ajĭ sub-gens of the ₵atada; 3. Ma$^{n}$₵iñka-gaxe; 4. ⅃a-da; 5. ⅃e-sĭnde; 6. Ictasanda; 7. Hañga (*sic*). In order to reach the Hañga again the seven old men had to go partly around the circle a second time. These are the gentes that had pipes and chiefs at the first. The chiefs of the three remaining gentes, the Weji$^{n}$cte, ⅄a$^{n}$ze, and Iñg₵e-jide, were not made for years afterward. He also said that the buffalo skull given to the ⅃e-da-it'ajĭ was regarded as equivalent to a sacred pipe.

The writer is inclined to think that there is some truth in what Gahige has said, though he cannot accept all of his statement. Gahige gives one pipe to the Hañga gens; Two Crows intimated that his gens was the virtual keeper of a pipe. But A$^{n}$ba-hebe's story shows that it was not a real pipe, but the firebrand for lighting the pipes. In like manner, ⅃e-da-it'ajĭ has not a real pipe, but the buffalo skull, which is considered as a pipe. Hence, it may be that the men who are called "keepers of the pipes" in the ⅄a$^{n}$ze, Ma$^{n}$₵iñka-gaxe, ⅃a-da, ⅃e-sĭnde, and Ictasanda gentes never had real pipes but certain objects which are held sacred, and have some connection with the two pipes kept by the Iñke-sabĕ.

### A$^{n}$BA-HEBE'S ACCOUNT OF THE TRADITION OF THE PIPES.

§ 16. The following is the tradition of the sacred pipes, according to A$^{n}$ba-hebe, the aged historian of the Omahas:

The old men made seven pipes and carried them around the tribal circle. They first reached Weji$^{n}$cte, who sat there as a male elk, and was frightful to behold, so the old men did not give him a pipe. Passing on to the Iñke-sabĕ, they gave the first pipe to the head of that gens. Next they came to Hañga, to whom they handed a firebrand, saying, "Do thou keep the firebrand," *i. e.*, "You are to thrust it into the pipe-bowls." Therefore it is the duty of Hañga to light the pipes for the chiefs (*sic*). When they reached the Bear people they feared them because they sat there with the sacred bag of black bear-skin, so they did not give them a pipe. The Blackbird people received no pipe because they sat with the sacred bag of bird-skins and feathers. And the old men feared the Turtle people, who had made a big turtle on the ground, so they passed them by. But when they saw the Eagle people they gave them a pipe because they did not fear them, and the buffalo was good. (Others say that the Eagle people had started off in anger when they found themselves slighted, but the old men pursued them, and on overtaking them they handed them a bladder filled with tobacco, and also a buffalo skull, saying, "Keep this skull as a sacred thing." This

appeased them, and they rejoined the tribe.) Next the old men saw the ɣaⁿze, part of whom were good, and part were bad. To the good ones they gave a pipe. The Maⁿ¢iñka-gaxe people were the next gens. They, too, were divided, half being bad. These bad ones had some stones at the front of their lodge, and they colored these stones, as well as their hair, orange-red. They wore plumes (hiⁿqpe) in their hair (and a branch of cedar wrapped around their heads.—La Flèche), and were awful to behold. So the old men passed on to the good ones, to whom they gave the fourth pipe. Then they reached the ɻe-sínde, half of whom made sacred a buffalo, and are known as those who eat not the lowest rib. Half of these were good, and they received the fifth pipe. All of the ɻa-da (Aⁿba-hebe's own gens!) were good, and they obtained the sixth pipe. The Iũg¢e-jide took one whole side of a buffalo, and stuck it up, leaving the red body but partially buried in the ground, after making a tent of the skin. They who carried the pipes around were afraid of them, so they did not give them one. Last of all they came to the Ictasanda. These people were disobedient, destitute of food, and averse to staying long in one place. As the men who had the pipes wished to stop this, they gave the seventh pipe to the fourth subgens of the Ictasanda, and since then the members of this gens have behaved themselves.

J. La Flèche and Two Crows say that "Wejiⁿcte loved his waqube, the miɋasi, or coyote, and so he did not wish a pipe" which pertained to peace. "Hañga does not light the pipes for the chiefs", that is, he does not *always* light the pipes.

§ 17. The true division of labor appears to be as follows: Hañga was the source of the sacred pipes, and has a right to all, as that gens had the first authority. Hañga is therefore called "Ɨ¢ig¢aⁿ'qti aké," as he does what he pleases with the pipes. Hañga told Iũke-sabĕ to carry the pipes around the tribal circle; so that is why the seven old men did so. And as Hañga directed it to be done, Iũke-sabĕ is called "A¢iⁿ' aké," The Keeper. Ictasanda fills the pipes. When the Ictasanda man who attends to this duty does not come to the council the pipes cannot be smoked, as no one else can fill them. This man, who knows the ritual, sends all the others out of the lodge, as they must not hear the ancient words. He utters some words when he cleans out the pipe-bowl, others when he fills the pipe, etc. He does not always require the same amount of time to perform this duty. Then all return to the lodge. Hañga, or rather a member of that gens, lights the pipes, except at the time of the greasing of the sacred pole, when he, not Ictasanda, fills the pipes, and some one else lights them for him. (See § 152.) These three gentes, Hañga, Iũke-sabĕ, and Ictasanda, are the only rulers among the keepers of the sacred pipes. The other keepers are inferior; though said to be keepers of sacred pipes, the pipes are not manifest.

These seven niniba waqube are peace pipes, but the niniba waqube of the Wejiⁿcte is the war pipe.

§ 18. The two sacred pipes kept by Iũke-sabĕ are used on various ceremonial occasions. When the chiefs assemble and wish to make a decision for the regulation of tribal affairs, Ictasanda fills both pipes and lays them down before the two head chiefs. Then the Iũke-sabĕ keeper takes one and the ɻe-da it'ajĭ keeper the other. Iũke-sabĕ precedes, starting from the head chief sitting on the right and passing around

half of the circle till he reaches an old man seated opposite the head chief. This old man (one of the Hañga wagȩa) and the head chief are the only ones who smoke the pipe; those sitting between them do not smoke it when Iũke-sabĕ goes around. When the old man has finished smoking Iũke-sabĕ takes the pipe again and continues around the circle to the starting-point, but he gives it to each man to smoke. When he reaches the head chief on the left he gives it to him, and after receiving it from him he returns it to the place on the ground before the head chiefs.

When Iũke-sabĕ reaches the old man referred to ⌊e-da-it'ajĭ starts from the head chiefs with the other pipe, which he hands to each one, including those sitting between the second head chief and the old man. ⌊e-da-it'ajĭ always keeps behind Iũke-sabĕ just half the circumference of the circle, and when he receives the pipe from the head chief on the left he returns it to its place beside the other. Then, after the smoking is over, Ictąsanda takes the pipes, overturns them to empty out the ashes, and cleans the bowls by thrusting in a stick. (See §§ 111, 130, 296, etc.)

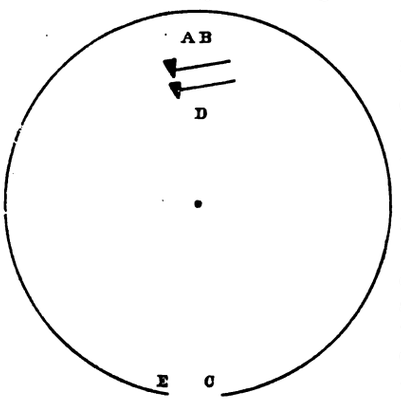



FIG. 13.—Places of the chiefs, etc., in the tribal assembly.
A.—The first head chief, on the left. B.—The second head chief, on the right. C.—The two Hañga wagȩa, one being the old man whom Iũke-sabĕ causes to smoke the pipe. D.—The place where the two pipes are laid. The chiefs sit around in a circle. E.—The giver of the feast.

In smoking they blew the smoke upwards, saying, "Here, Wakanda, is the smoke." This was done because they say that Wakanda gave them the pipes, and He rules over them.

§ 19. Frank La Flèche told the following:

The sacred pipes are not shown to the common people. When my father was about to be installed a head chief, Mahiⁿ-zi, whose duty it was to fill the pipes, let one of them fall to the ground, violating a law, and so preventing the continuation of the ceremony. So my father was not fully initiated. When the later fall was partly gone Mahiⁿ-zi died.

Wacuce, my father-in-law, was the Iũke-sabĕ keeper of the pipes. When the Otos visited the Omahas (in the summer of 1878), the chiefs wished the pipes to be taken out of the coverings, so they ordered Wacuce to undo the bag. This was unlawful, as the ritual prescribed certain words to be said by the chiefs to the keeper of the pipes previous to the opening of the bag. But none of the seven chiefs know the formula. Wacuce was unwilling to break the law; but the chiefs insisted, and he yielded. Then Two Crows told all the Omahas present not to smoke the small pipe. This he had a right to do, as he was a Hañga. Wacuce soon died, and in a short time he was followed by his daughter and his eldest son.

It takes four days to make any one understand all about the laws of the sacred pipes; and it costs many horses. A bad man, *i. e.*, one who is saucy, quarrelsome stingy, etc., cannot be told such things. This was the reason why the seven chiefs did not know their part of the ritual.

## LAW OF MEMBERSHIP.

§ 20. A child belongs to its father's gens, as "father-right" has succeeded "mother-right." But children of white or black men are assigned to the gentes of their mothers, and they cannot marry any women of those gentes. A stranger cannot belong to any gens of the tribe, there being no ceremony of adoption into a gens.

## THE WEJI$^{N}$CTE OR ELK GENS.

§ 21. This gens occupies the first place in the tribal circles, pitching its tents at one of the horns or extremities, not far from the Ictasanda gens, which camps at the other end. When the ancient chieftainship was abolished in 1880, Mahi$^{n}$-ɸiñge was the chief of this gens, having succeeded Joseph La Flèche in 1865.

The word "Weji$^{n}$cte" cannot be translated, as the meaning of this archaic word has been forgotten. It may have some connection with "waji$^{n}$'cte," *to be in a bad humor*, but we have no means of ascertaining this.

La Flèche and Two Crows said that there were no subgentes in this gens. But it seems probable that in former days there were subgentes in each gens, while in the course of time changes occurred, owing to decrease in numbers and the advent of the white men.

*Taboo.*—The members of this gens are afraid to touch any part of the male elk, or to eat its flesh; and they cannot eat the flesh of the male deer. Should they accidentally violate this custom they say that they are sure to break out in boils and white spots on different parts of the body. But when a member of this gens dies he is buried in moccasins made of deer skin.

*Style of wearing the hair.*—The writer noticed that Bi$^{n}$ze-tigɸe, a boy of this gens, had his hair next the forehead standing erect, and that back of it was brushed forward till it projected beyond the former. A tuft of hair at the back extended about 3 inches below the head. This style of wearing the hair prevails only among the smaller children as a rule; men and women do not observe it.

Some say that 'A$^{n}$-wega$^{n}$ɸa is the head of those who join in the worship of the thunder, but his younger brother, Qaga-ma$^{n}$ɸi$^{n}$, being a more active man, is allowed to have the custody of the Iñgɸa$^{n}$ɸĕ and the Iñgɸa$^{n}$hañgac'a. J. La Flèche and Two Crows said that this might be so; but they did not know about it. Nor could they or my other informants tell the meaning of Iñgɸa$^{n}$ɸĕ and Iñgɸa$^{n}$hañgac'a. Perhaps they refer either to the wild-cat (iñgɸañga), or to the thunder (iñgɸa$^{n}$). Compare the Ictasanda "keepers of the claws of a wild-cat."

§ 22. *The sacred tent.*—The sacred tent of the Elk gens is consecrated to war, and scalps are given to it, but are not fastened to it, as some have asserted. Bɸa$^{n}$ti used to be the keeper of it, but he has resigned the charge of it to the ex-chief, Mahi$^{n}$ɸiñge.

The place of this sacred tent is within the tribal circle, and near the camping place of the gens. This tent contains one of the waɸíxabe, a sacred bag, made of the feathers and skin of a bird, and consecrated to war. (See § 196.) There is also another sacred bag in this tent, that which holds the sacred ɻíhaba or clam shell, the bladder of a male elk filled with tobacco, and the sacred pipe of the gens, the tribal war-pipe, which is made of red pipe-stone. The ɻihaba is about nine inches in diameter, and about four inches thick. It is kept in a bag of buffalo hide which is never placed on the ground. In ancient days it was carried on the back of a youth, but in modern times, when a man could not be induced to carry it, it was put with its buffalo-skin bag into the skin of a coyote, and a woman took it on her back. When the tribe is not in motion the bag is hung on a cedar stick about five feet high, which had been planted in the ground. The bag is fastened with some of the sinew of a male elk, and cannot be opened except by a member of the Wasabe-hit'ajĭ sub-gens of the ɸatada. (See § 45, etc.)

§ 23. *Service of the scouts.*—When a man walks in dread of some unseen danger, or when there was an alarm in the camp, a crier went around the tribal circle, saying, "Maja$^{n}$′ iɸégasañga té wí áɸi$^{n}$he+!" *I who move am he who will know what is the matter with the land!* (*i. e.*, I will ascertain the cause of the alarm.) Then the chiefs assembled in the war tent, and about fifty or sixty young men went thither. The chiefs directed the Elk people to make the young men smoke the sacred pipe of the Elk gens four times, as those who smoked it were compelled to tell the truth. Then one of the servants of the Elk gens took out the pipe and the elk bladder, after untying the elk sinew, removed some of the tobacco from the pouch (elk bladder), which the Elk men dare not touch, and handed the pipe with the tobacco to the Elk man, who filled it and lighted it. They did not smoke with this pipe to the four winds, nor to the sky and ground. The Elk man gave the pipe to one of the bravest of the young men, whom he wished to be the leader of the scouts. After all had smoked the scouts departed. They ran around the tribal circle and then left the camp. When they had gone about 20 miles they sat down, and the leader selected a number to act as policemen, saying, "I make you policemen. Keep the men in order. Do not desire them to go aside." If there were many scouts, about eight were made policemen. Sometimes there were two, three, or four leaders of the scouts, and occasionally they sent some scouts in advance to distant bluffs. The leaders followed with the main body. When they reached home the young men scattered, but the leaders went to the Elk tent and reported what they had ascertained. They made a *detour*, in order to avoid encountering the foe, and sometimes they were obliged

to flee to reach home. This service of the young men was considered as equivalent to going on the war path.

§ 24. *Worship of the thunder in the spring.*— When the first thunder is heard in the spring of the year the Elk people call to their servants, the Bear people, who proceed to the sacred tent of the Elk gens. When the Bear people arrive one of them opens the sacred bag, and, after removing the sacred pipe, hands it to one of the Elk men, with some of the tobacco from the elk bladder. Before the pipe is smoked it is held toward the sky, and the thunder god is addressed. Joseph La Flèche and Two Crows do not know the formula, but they said that the following one, given me by a member of the Ponka Hisada (Wasabe-hit'ajĭ) gens, may be correct. The thunder god is thus addressed by the Ponkas: "Well, venerable man, by your striking (with your club) you are frightening us, your grandchildren, who are here. Depart on high. According to ɖáɸi$^{a}$na$^{a}$pájĭ, one of the Wasabe-hit'ajĭ, who has acted as a servant for the Elk people, "At the conclusion of this ceremony the rain always ceases, and the Bear people return to their homes." But this is denied by Joseph La Flèche and Two Crows, who say, "How is it possible for them to stop the rain?"

While the Elk gens is associated with the war path, and the worship of the thunder god, who is invoked by war chiefs, those war chiefs are not always members of this gens, but when the warriors return, the keeper of the sacred bag of this gens compels them to speak the truth about their deeds. (See § 214.)

§ 25. *Birth names of boys.*—The following are the birth names of boys in the Elk gens. These are sacred or nikie names, and sons used to be so named in former days according to the order of their births. For example, the first-born son was called the Soft Horn (of the young elk at its first appearance). The second, Yellow Horn (of the young elk when a little older). The next, the Branching Horns (of an elk three years old). The fourth, the Four Horns (of an elk four years old). The fifth, the Large Pronged Horns (of an elk six or seven years old). The sixth, the Dark Horns (of a grown elk in summer). The seventh, the Standing White Horns, in the distance (*i. e.*, those of a grown elk in winter).

*Other proper names.*—The following are the other nikie[3] names of

3. Nikie names are those referring to a mythical ancestor, to some part of his body, to some of his acts, or to some ancient rite which may have been established by him. Nikie names are of several kinds. (*a.*) The seven birth names for each sex. (*b.*) Other nikie names, not birth names, but peculiar to a single gens. (*c.*) Names common to two or more gentes. There are two explanations of the last case. All the gentes using the same name may have had a common mythical ancestor or a mythical ancestor of the same species or genus. Among the Osages and Kansas there are gentes that exchange names; and it is probable that the custom has existed among the Omahas. Some of these gentes that exchange names are those which have the same sacred songs.

The following law about nikie names has been observed by the Omahas:

There must never be more than one person in a gens bearing any particular male name.

the Elk gens: Elk. Young Elk. Standing Elk. White Elk (near by). Big Elk. 'A$^{n}$-wega$^{n}$¢a (meaning uncertain). B¢a$^{n}$-ti, The odor of the dung or urine of the elk is wafted by the wind (said of any place where the elk may have been). (A young elk) Cries Suddenly. Hidaha (said to mean Treads on the ground in walking, or, Passes over what is at the bottom). Iron Eyes (of an elk). Bullet-shaped Dung (of an elk). (Elk) Is coming back—fleeing from a man whom he met. Muscle of an elk's leg. Elk comes back suddenly (meeting the hunter face to face). (Elk) Turns round and round. No Knife or No Stone (probably referring to the tradition of the discovery of four kinds of stone). Dark Breast (of an elk). Deer lifts its head to browse. Yellow Rump (of an elk). Walking Full-grown Elk. (Elk) Walks, making long strides, swaying from side to side. Stumpy Tail (of an elk). Forked Horn (of a deer). Water-monster. The Brave Weji$^{n}$cte (named after his gens). *Women's names.*—Female Elk. Tail Female. Black Moose (?) Female. Big Second-daughter (any gens can have it). Sacred Third-daughter (Elk and Iñke-sabĕ gentes). Iron-eyed Female (Elk and Hañga gentes). Land Female (Elk and ¢atada gentes). Moon that Is-traveling (Elk, Iñke-sabĕ, Hañga, ¢atada, and ꓘa$^{n}$ze gentes); Na$^{n}$-ze-i$^{n}$-ze, meaning uncertain (Elk, ¢atada, and Deer gentes). Ninda-wi$^{n}$ (Elk, ¢atada, and Ictasanda gentes). *Names of ridicule.*—Dog. Crazed by exposure to heat. Good Buffalo.

§ 26. According to ⅃e-da-u¢iqaga, the chief A$^{n}$pa$^{n}$-ʒañga, the younger, had a boat and flag painted on the outside of his skin tent. These were made "qube," sacred, but were not nikie, because they were not transmitted from a mythical ancestor.

§ 27. This gens has furnished several head chiefs since the death of the famous Black Bird. Among these were A$^{n}$pa$^{n}$-skă (head chief after 1800), A$^{n}$pa$^{n}$-ʒañga, the elder, the celebrated Big Elk, mentioned by Long and other early travelers, and A$^{n}$pa$^{n}$-ʒañga, the younger. On the death of the last, about A. D. 1853, Joseph La Flèche succeeded him as a head chief.

## THE IÑKE-SABĔ, OR BLACK SHOULDER GENS.

§28. This is a Buffalo gens, and its place in the tribal circle is next to that of the Elk gens. The head chiefs of this gens in 1880 were Gahige

For instance, when, in any household, a child is named Wasabe-jiñga, that name cannot be given to any new-born child of that gens. But when the first bearer of the name changes his name or dies, another boy can receive the name Wasabe-jiñga. As that is one of the seven birth names of the Wasabe-hit'ajĭ it suggests a reason for having extra nikie names in the gens. This second kind of nikie names may have been birth names, resorted to because the original birth names were already used. This law applies in some degree to girls' names, if parents know that a girl in the gens has a certain name they cannot give that name to their daughter. But should that name be chosen through ignorance, the two girls must be distinguished by adding to their own names those of their respective fathers.

(who died in 1882), and Duba-ma$^{n}$¢i$^{n}$, who "sat on opposite sides of the gentile *fire-place*." Gahige's predecessor was Gahige-jiñga or Icka-dabi.

*Creation myth*, told by Gahige.—The first men created were seven in number. They were all made at one time. Afterwards seven women were made for them. At that time there were no gentes; all the people were as one gens. (Joseph La Flèche and Two Crows never heard this, and the following was new to them:)

*Mythical origin* of the Iñke-sabĕ, as related by Gahige.—The Iñke-sabĕ were buffaloes, and dwelt under the surface of the water. When they came to the surface they jumped about in the water, making it muddy; hence the birth-name for the first son, Ni-gaqude. Having reached the land they snuffed at the four winds and prayed to them. The north and west winds were good, but the south and east winds were bad.

§ 29. *Ceremony at the death of a member of the gens.*—In former days, when any member of the gens was near death, he was wrapped in a buffalo robe, with the hair out, and his face was painted with the privileged decoration. Then the dying person was addressed thus: "You are going to the animals (the buffaloes). You are going to rejoin your ancestors. (Ániꞁa dúbaha hné. Wackañ'-gă, *i.e.*) You are going, or, Your four souls are going, to the four winds. Be strong!" All the members of this gens, whether male or female, were thus attired and spoken to when they were dying. (La Flèche and Two Crows say that nothing is said about four souls, and that "Wackañ-gă" is not said; but all the rest may be true. See § 35 for a similar custom.) The "hañga-ꞁi'a$^{n}$ze," or privileged decoration, referred to above and elsewhere in this monograph, is made among the Omahas by painting two parallel lines across the forehead, two on each cheek and two under the nose, one being above the upper lip and the other between the lower lip and the chin.

§ 30. When the tribe went on the buffalo hunt and could get skins for tents it was customary to decorate the outside of the principal Iñke-sabĕ tent, as follows, according to ⊥e-da-u¢iqaga: Three circles were painted, one on each side of the entrance to the tent, and one at the back, opposite the entrance. Inside each of these was painted a buffalo-head. Above each circle was a pipe, ornamented with eagle feathers.

Frank La Flèche's sketch is of the regular peace pipe; but his father drew the calumet pipe, from which the duck's head had been taken and the pipe-bowl substituted, as during the dancing of the Hedewatci. (See §§ 49 and 153.)

A model of the principal ⊥e-da-it'ajĭ tent, decorated by a native artist, was exhibited by Miss Alice C. Fletcher, at the session of the American Association at Montreal in 1882. It is now at the Peabody Museum.

*Iñke-sabĕ style of wearing the hair.*—The smaller boys have their hair cut in this style. A A, the horns of the buffalo, being two locks of

hair about two inches long. B is a fringe of hair all around the head. It is about two inches long. The rest of the head is shaved bare.

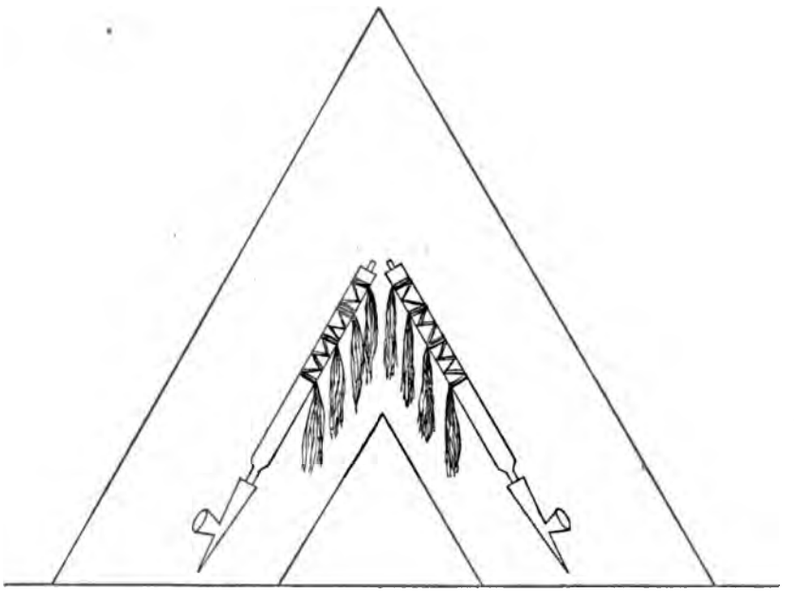


FIG. 14.—Frank La Flèche's sketch of the Iñke-sabĕ tent, as he saw it when he went on the buffalo hunt.

§ 31. *Subgentes and Taboos.*—There has evidently been a change in the subgentes since the advent of the white man. In 1878, the writer was told by several, including La Flèche, that there were then three subgentes in existence, Wa¢ígije, Wata$^{n}$'zi-jíde ¢atájĭ, and Naq¢é-it'abájĭ; the fourth, or Íekí¢ĕ, having become extinct. Now (1882), La Flèche and Two Crows give the three subgentes as follows: 1. Wa¢ígije; 2. Niníba t'a$^{n}$; 3. (a part of 2) Íekí¢ĕ. The second subgens is now called by them "Wata$^{n}$'zi-ji'de ¢atájĭ and Naq¢é ít'abájĭ." "Ɩa$^{n}$¢i$^{n}$-na$^{n}$ba and Nágu or Wa¢ánase are the only survivors of the real Niniba-t'a$^{n}$, Keepers of the Sacred Pipes." (Are not these the true Naq¢é-it'ábajĭ, *They who cannot touch charcoal?* *I. e.*, it is not their place to touch a fire-brand or the ashes left in the sacred pipes after they have been used.) "The Sacred Pipes were taken from the ancestors of these two and were given into the charge of Ickadabi, the paternal grandfather of Gahige." Yet these men are stillcalled Niniba-t'a$^{n}$, while "Gahige belongs to the Wata$^{n}$zi-jide ¢atajĭ and Naq¢e-it'abajĭ, and he is one of those from whom the Iekí¢ĕ could be selected."

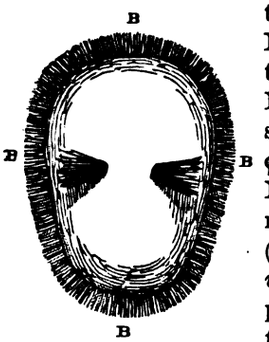



FIG. 15.—Iñke-sabĕ style of wearing the hair.

In 1878 La Flèche also gave the divisions and taboos of the Iñke-sabĕ as follows: "1. Niniba-t'a$^{n}$; 2. Wata$^{n}$zi-jide ɸatajĭ; 3. ⌊e-hé-sábĕ it'ájĭ; 4. ⌊e-ɸéze ɸatájĭ;" but he did not state whether these were distinct subgentes. The ⌊e-he-sabĕ it'ajĭ, Those who touch not black horns (of buffaloes), appear to be the same as the ⌊e-ɸeze ɸatajĭ, *i. e.*, the Waɸígije. The following is their camping order: In the tribal circle, the Waɸigije camp next to the Hañga gens, of which the Wacabe people are the neighbors of the Waɸigije, having almost the same taboo. The other Iñke-sabĕ people camp next to the Wejí$^{n}$cte gens. But in the gentile "council-fire" a different order is observed; the first becomes last, the Waɸigije having their seats on the left of the fire and the door, and the others on the right.

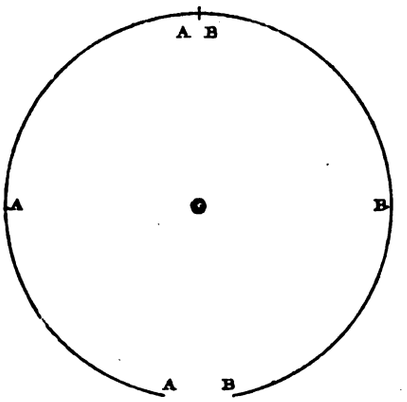


FIG. 16.—The Iñke-sabĕ Gentile Assembly. A.—The Waɸigije, or Waqúbe gáxe aká, under Duba-ma-ɸi$^{n}$. B.—The Wata$^{n}$zi-jide ɸatajĭ; the Iekiɸĕ, and the Naqɸe-it'abajĭ. These were under Gahige.

The Waɸigije cannot eat buffalo tongues, and they are not allowed to touch a buffalo head. (See §§ 37, 49, and 59.) The name of their subgens is that of the hooped rope, with which the game of "⌡aɸi$^{n}$-jahe" is played. Gahige told the following, which is doubted by La Flèche and Two Crows: "One day, when the principal man of the Waɸigije was fasting and praying to the sun-god, he saw the ghost of a buffalo, visible from the flank up, arising out of a spring. Since then the members of his subgens have abstained from buffalo tongues and heads."

Gahige's subgens, the Wata$^{n}$zi-jide ɸatajĭ, do not eat red corn. They were the first to find the red corn, but they were afraid of it, and would not eat it. Should they eat it now, they would have running sores all around their mouths. Another tradition is that the first man of this subgens emerged from the water with an ear of red corn in his hand.

The Iekiɸĕ are, or were, the Criers, who went around the tribal circle proclaiming the decisions of the chiefs, etc.

Prior to 1878, Wacuce, Gahige's brother, was the keeper of the two sacred pipes. At his death, in that year, his young son succeeded him as keeper; but, as he was very young, he went to the house of his father's brother, Gahige, who subsequently kept the pipes himself.

§ 32. Gahige said that his subgens had a series of Eagle birth-names, as well as the Buffalo birth-names common to the whole gens. This was owing to the possession of the sacred pipes. While these names may have denoted the order of birth some time ago, they are now bestowed without regard to that, according to La Flèche and Two Crows.

*Buffalo birth-names.*—The first son was called "He who stirs up or muddies the water by jumping in it," referring to a buffalo that lies

down in the water or paws in the shallow water, making it spread out in circles. The second son was "Buffaloes swimming in large numbers across a stream." The third was Si-ɻa$^{n}$-qega, referring to a buffalo calf, the hair on whose legs changes from a black to a withered or dead hue in February. The fourth was "Knobby Horns (of a young buffalo bull)". The fifth was "He (*i. e.*, a buffalo bull) walks well, without fear of falling." The sixth was "He (a buffalo bull) walks slowly (because he is getting old)." The seventh was called Gaqaɻa-naji$^{n}$, explained by the clause, "ɻenúga-wi$^{n}$áqtci, júgǥe ǥiũgé, a single buffalo bull, without a companion." It means a very old bull, who stands off at one side apart from the herd.

*The Eagle birth-names* (see § 64), given by Gahige, are as follows: Qiǥá-i$^{n}$[4] (meaning unknown to La Flèche and Two Crows; word doubted by them). Eagle Neck. Waji$^{n}$-hañga, He who leads in disposition. Ki$^{n}$ka-ɻañga, the first bird heard in the spring when the grass comes up (the marbled godwit?). Blue Neck (denied by La Flèche and Two Crows). Rabbit (La Flèche and Two Crows said that this name belonged to the Hañga gens). Ash tree (doubted by La Flèche and Two Crows). A birth-name of this series could be used instead of the corresponding one of the gentile series, *e. g.*, Gahige could have named his son, Uka$^{n}$adigǥa$^{n}$, either Siɻa$^{n}$-qega or Waji$^{n}$-hañga. There were similar series of birth-names for girls, but they have been forgotten.

§ 33. *Principal* Iũke-sabĕ *names.*—I. *Men.*—(Buffalo that) Walks Last in the heard. (Buffalo) Runs Among (the people when chased by the hunters). Four (buffaloes) Walking. Black Tongue (of a buffalo). The Chief. Real Chief. Young Chief. Walking Hawk. Without any one to teach him (*i. e.*, He knows things of his own accord). (Buffalo) Makes his own manure miry by treading in it. Horns alone visible (there being no hair on the young buffalo bull's head). Little (buffalo) with Yellowish-red hair. He who practices conjuring. Thick Shoulder (of a buffalo). (Buffalo) Comes suddenly (over the hill) meeting the hunters face to face. Swift Rabbit. Rabbit (also in Hañga gens). He who talks like a chief; referring to the sacred pipes. Big Breast (of a buffalo). Seven (some say it refers to the seven sacred pipes). (He who) Walks Before (the other keepers of the sacred pipes). Badger. Four legs of an animal, when cut off. Bent Tail. Double or Cloven Hoofs (of a buffalo). Yonder Stands (a buffalo that) Has come back to you. Buffalo runs till he gets out of range of the wind. Little Horn (of a buffalo). Two (young men) Running (with the sacred pipes during the Hede-watci). Skittish Buffalo Calf. Foremost White Buffalo in the distance. Looking around. (Buffalo?) Walks Around it. (Buffalo) Scattering in different directions. Big Boiler (a generous man, who put two kettles on the fire). (Buffalo) Sits apart from the rest. He who makes one Stagger by pushing against him. He who

[4] Probably Qiǥa-hi$^{n}$, as the Osages have Qüǥa-hi$^{n}$, Eagle Feathers.

speaks saucily. Difficult Disposition or Temper (of a growing buffalo calf). The Shooter. He who fears no seen danger. Young Turkey.

II. *Women.*—Sacred Third-daughter. She by Whom they were made Human beings (see Osage tradition of the Female Red Bird). Moon in Motion during the Day. Moon that Is traveling. Moon Has come back Visible. Foremost or Ancestral Moon (first quarter?). Visible Moon. White Ponka (female) in the distance. Precious Female. Visible one that has Returned, and is in a Horizontal attitude. Precious Buffalo Human-female. Buffalo Woman.

## THE HAÑGA GENS.

§ 34. Hañga seems to mean, "foremost," or "ancestral." Among the Omahas this gens is a buffalo gens; but among the Kansas and Osages it refers to other gentes. In the Omaha tribal circle, the Hañga people camp next to the Iñkĕ-sabe. Their two chiefs are Two Crows and Ictabasude, elected in 1880. The latter was elected as the successor of his father, "Yellow Smoke," or "Two Grizzly Bears."

*Mythical origin of the gens.*—According to Yellow Smoke, the first Hañga people were buffaloes and dwelt beneath the water. When they were there they used to move along with their heads bowed and their eyes closed. By and by they opened their eyes in the water; hence their first birth-name, Niadi-icta-ugabȼa. Emerging from the water, they lifted their heads and saw the blue sky for the first time. So they assumed the name of ɣeȼa-gaxe, or "Clear sky makers." (La Flèche, in 1879, doubted whether this was a genuine tradition of the gens; and he said that the name Niadi-icta-ugabȼa was not found in the Hañga gens; it was probably intended for Niadi-ctagabi. This referred to a buffalo that had fallen into mud and water, which had spoiled its flesh for food, so that men could use nothing but the hide. Two Crows said that Niadi-ctagabi was an ancient name.)

§ 35. *Ceremony at the death of a member of the gens.*—In former days, when any member of the gens was near death he was wrapped in a buffalo robe, with the hair out, and his face was painted with the "hañgaɣi'aⁿze." Then the dying person was thus addressed by one of his gens: "You came hither from the animals. And you are going back thither. Do not face this way again. When you go, continue walking." (See § 29.)

§ 36. *The sacred tents.*—There are two sacred tents belonging to this gens. When the tribal circle is formed these are pitched within it, about 50 yards from the tents of the gens. Hence the proper name, Uȼuci-najiⁿ. A straight line drawn from one to the other would bisect the road of the tribe at right angles.

The sacred tents are always together. They pertain to the buffalo hunt, and are also "wéwaspe," having a share in the regulative system

of the tribe, as they contain two objects which have been regarded as "Wakañda égaⁿ," partaking of the nature of deities.

These objects are the sacred pole or "waqɸéxe," and the "ǫe-saⁿ′-ha." The decoration of the outside of each sacred tent is as follows: A corn-stalk on each side of the entrance and one on the back of the tent, opposite the entrance. (Compare the ear of corn in the calumet dance. See §§ 123 and 163.)

*Tradition of the sacred pole.*—The "waqɸexe," "jaⁿ′ waqúbe," or sacred pole, is very old, having been cut more than two hundred years ago, before the separation of the Omahas, Ponkas, and Iowas. The Ponkas still claim a share in it, and have a tradition about it, which is denied by La Flèche and Two Crows. The Ponkas say that the tree from which the pole was cut was first found by a Ponka of the Hisada gens, and that in the race which ensued a Ponka of the Makaⁿ gens was the first to reach the tree. The Omahas tell the following:

At the first there were no chiefs in the gentes, and the people did not prosper. So a council was held, and they asked one another, "What shall we do to improve our condition?" Then the young men were sent out. They found many cotton-wood trees beside a lake, but one of these was better than the rest. They returned and reported the tree, speaking of it as if it was a person. All rushed to the attack. They struck it and felled it as if it had been a foe. They then put hair on its head, making a person of it. Then were the sacred tents made, the first chiefs were selected, and the sacred pipes were distributed.

The sacred pole was originally longer than it is now, but the lower part having worn out, a piece of ash-wood, about 18 inches long, has been fastened to the cotton-wood with a soft piece of cord made of a buffalo hide. The ash-wood forms the bottom of the pole, and is the part which is stuck in the ground at certain times. The cotton-wood is about 8 feet long.

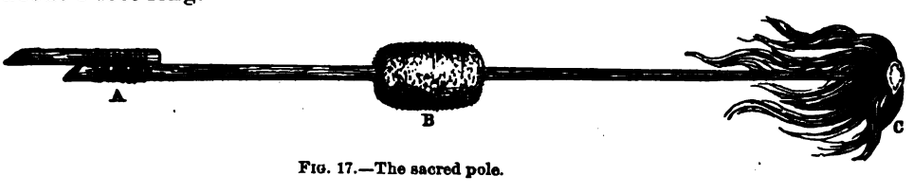



FIG. 17.—The sacred pole.

A.—The place where the two pieces of wood are joined.

B.—The aqande-pa or hiⁿ-qpe-iɸibaⁿ, made of the down of the miⁿxa (a swan. See the Maⁿɸiñka gaix gens.)

C.—The scalp, fastened to the top, whence the proper name, Nik'umiⁿje, Indian-man's (scalp) couch.

Two Crows said that the pole rested on the scalp when it was in the lodge. The proper name, Miⁿ-wasaⁿ, referring to the miⁿxasaⁿ or swan, and also to the aqande-pa (B). The proper name, "Yellow Smoke" (rather), "Smoked Yellow," or Cude-nazi, also refers to the pole, which has become yellow from smoke. Though a scalp is fastened to the top, the pole has nothing to do with war. But when the Omahas encounter enemies, any brave man who gets a scalp may decide to present it to the sacred pole. The middle of the pole has swan's down wrapped

around it, and the swan's down is covered with cotton-wood bark, over which is a piece of ʇéha (buffalo hide) about 18 inches square. All the ʇeha and cord is made of the hide of a hermaphrodite buffalo. This pole used to be greased every year when they were about to return home from the summer hunt. The people were afraid to neglect this ceremony lest there should be a deep snow when they traveled on the next hunt.

When Joseph La Flèche lost his leg, the old men told the people that this was a punishment which he suffered because he had opposed the greasing of the sacred pole. As the Omahas have not been on the hunt for about seven years, the sacred tents are kept near the house of Waka$^{n}$-ma$^{n}$ɸi$^{n}$. (See § 295.)

The other sacred tent, which is kept at present by Waka$^{n}$-ma$^{n}$ɸi$^{n}$, contains the sacred "ʇe-sa$^{n'}$-ha," the skin of a white buffalo cow, wrapped in a buffalo hide that is without hair.

Joseph La Flèche had two horses that ran away and knocked over the sacred tents of the Hañga gens. The two old men caught them and rubbed them all over with wild sage, saying to Frank La Flèche, "If you let them do that again the buffaloes shall gore them."

§ 37. *Subgentes* and Taboos.—There are two great divisions of the gens, answering to the number of the sacred tents: The Keepers of the Sacred Pole and The Keepers of the ⱡe-sa$^{n}$-ha. Some said that there were originally four subgentes, but two have become altogether or nearly extinct, and the few survivors have joined the larger subgentes.

There are several names for each subgens. The first which is sometimes spoken of as being "Ja$^{n'}$ha-aʇáɸica$^{n}$," Pertaining to the sacred cotton-wood bark, is the "Waqɸéxe aɸi$^{n'}$" or the "Ja$^{n'}$ waqúbe aɸi$^{n'}$," Keepers of the Sacred Pole. When its members are described by their taboos, they are called the "ⱡá waqúbe ɸatájĭ," Those who do not eat the "ʇa" or buffalo sides; and "Mi$^{n}$xa-sa$^{n}$ ɸatájĭ" and "ⱡéta$^{n}$ ɸatájĭ," Those who do not eat geese, swans, and cranes. These can eat the the buffalo tongues. The second subgens, which is often referred to as being "ⱡe-sa$^{n'}$-ha-ʇáɸica$^{n}$," Pertaining to the sacred skin of the white buffalo cow, consists of the Wacábe or Hañ'gaqti, the Real Hañga people. When reference is made to their taboo, they are called the "ⱡeɸéze ɸatájĭ," as they cannot eat buffalo tongues; but they are at liberty to eat the "ʇa," which the other Hañga cannot eat. In the tribal circle the Wacabe people camp next to the Iñke-sabĕ gens; and the Waqɸéxe aɸi$^{n}$ have the Quʇa of the ₱atada gens next to them, as he is their servant and is counted as one of their kindred. But, in the gentile circle, the Waqɸéxe aɸi$^{n}$ occupy the left side of the "council-fire," and the Wacabe sit on the opposite side.

§ 38. *Style of wearing the hair.*—The Hañga style of wearing the hair is called "ʇe-nañ'ka-báxe," referring originally to the back of a buffalo. It is a crest of hair, about 2 inches long, standing erect, and extending from one ear to the other. The ends of the hair are a little below the ears.

§ 39. *Birth-names of boys*, according to ꓷa¢iⁿ-naⁿpajĭ. The first is Niadi ctagabi; the second, Jaⁿ-gáp'uje, referring to the Sacred Pole. It may be equivalent to the Dakota Tcaⁿ-kap'oja (Ćaŋ-kapoźa), meaning that it must be carried by one unincumbered with much baggage. The third is named Maⁿ pějĭ, Bad Arrow, *i. e.*, Sacred Arrow, because the arrow has grown black from age! (Two Crows gave this explanation. It is probable that the arrow is kept in or with the "ꓷe-saⁿ-ha.")

The fourth is Fat covering the outside of a buffalo's stomach. The fifth is Buffalo bull. The sixth, Dangerous buffalo bull; and the seventh is Buffalo bull rolls again in the place where he rolled formerly.

§ 40. *Principal* Hañga *names*. I. *Men.*—(Buffalo) Makes a Dust by rolling. Smoked Yellow ("Yellow Smoke"). (Buffalo) Walks in a Crowd. He who makes no impression by Striking. Real Hañga. Short Horns (of a buffalo about two years old). (Buffalo calf) Sheds its hair next to the eyes. Two Crows. Flying Crow. He who gives back blow for blow, or, He who gets the better of a foe. Grizzly bear makes the sound "ꓷide" by walking. Grizzly bear's Head. Standing Swan. He (a buffalo?) who is Standing. (Buffalo?) That does not run. (Buffalo) That runs by the Shore of a Lake. Seven (buffalo bulls) In the Water. Pursuer of the attacking foe. Scalp Couch. Pointed Rump (of a buffalo?). Artichoke. Buffalo Walks at Night. A Buffalo Bellows. Odor of Buffalo Dung. Buffalo Bellows in the distance. (Sacred tent) Stands in the Middle (of the circle). Seeks Fat meat. Walking Sacred one. Corn. He who Attacks.

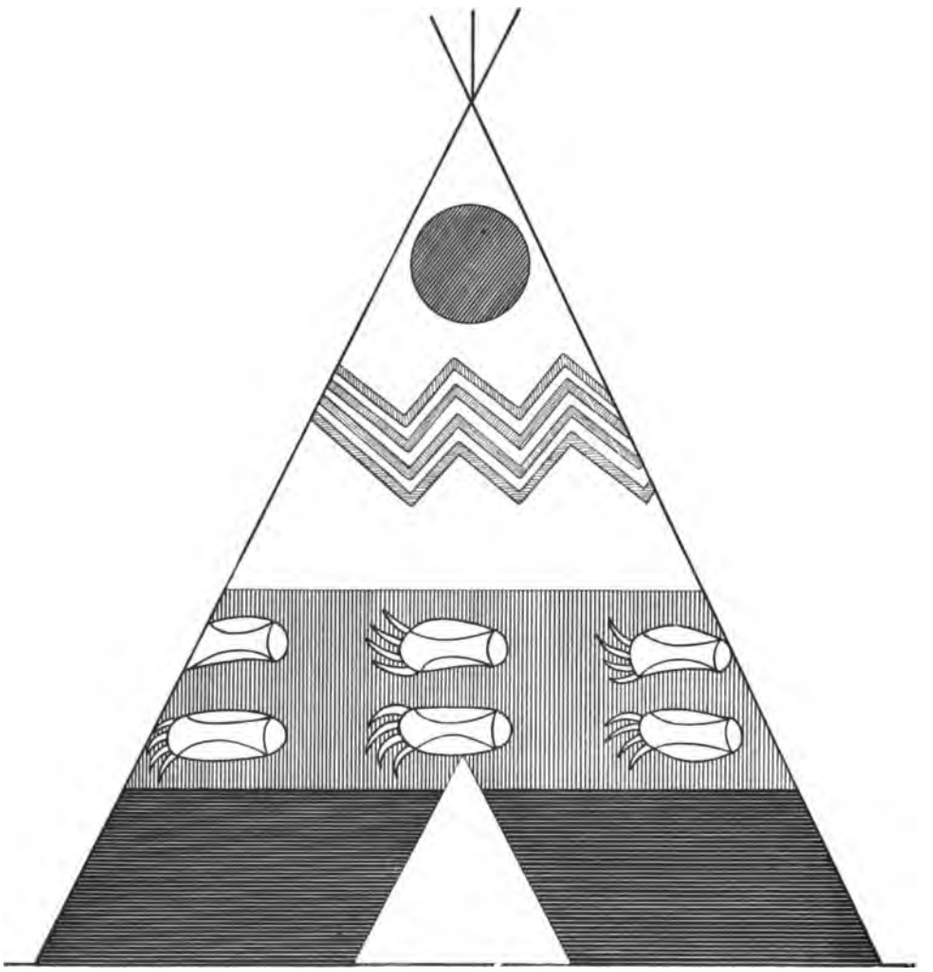
II. *Women.*—Iron-eyed Female. Moon that is Traveling. White Human-female Buffalo in the distance.

## THE ¢ATADA GENS.

§ 41. This gen occupies the fourth place in the tribal circle, being between the Hañga and the ꓘaⁿze. But, unlike the other gentes, its subgentes have separate camping areas. Were it not for the marriage law, we should say that the ¢atada was a phratry, and its subgentes were gentes. The present leaders of the gens are ꓷedegahi of the Wajiñga-¢atajĭ and Cyu-jiñga of the Wasabe-hit'ajĭ. When on the hunt the four subgentes pitch their tents in the following order in the tribal circle: 1. Wasabe-hit'ajĭ; 2. Wajiñga-¢atajĭ; 3. ꓶe-da-it'ajĭ; 4. ꓘe-'iⁿ. The Wasabe-hit'ajĭ are related to the Hañga on the one hand and to the Wajiñga-¢atajĭ on the other. The latter in turn, are related to the ꓶe-da-itajĭ; these are related to the ꓘe-'iⁿ; and the ꓘe-'iⁿ and ꓘaⁿze are related.

### THE WASABE-HIT'AJĬ SUBGENS.

§ 42. The name of this subgens is derived from three words: wasabe, *a black bear*; ha, *a skin*; and it'ajĭ, *not to touch;* meaning "Those who do



TENT OF AGAHA-WACUCE.

not touch the skin of a black bear." The writer was told in 1879, that the uju, or principal man of this subgens, was Icta-duba, but La Flèche and Two Crows, in 1882, asserted that they never heard of an "uju" of a gens.

*Taboo.*—The members of this subgens are prohibited from touching the hide of a black bear and from eating its flesh.

*Mythical origin.*—They say that their ancestors were made under the ground and that they afterwards came to the surface.

§ 43. Plate II is a sketch of a tent which belonged to Agaha-wacuce, the father of ɖaɬiⁿ-naⁿpajĭ. Hupeɬa's father, Hupeɬa II, owned it before Agaha-wacuce obtained it. The circle at the top representing a bear's cave, is sometimes painted blue. Below the zigzag lines (representing the different kinds of thunders?) are the prints of bear's paws. This painting was not a nikie but the personal "qube" or sacred thing of the owner. The lower part of the tent was blackened with ashes or charcoal.

§ 44. *Style of wearing the hair.*—Four short locks are left on the head, as in the following diagram. They are about 2 inches long.

*Birth-names of boys.*—ɖaɬiⁿ-naⁿpaĵĭ gave the following: The first son is called Young Black bear. The second, Black bear. The third, Four Eyes, including the true eyes and the two spots like eyes that are above the eyes of a black bear. The fourth, Gray Foot. The fifth, Cries like a Raccoon. (La Flèche said that this is a Ponka name, but the Omahas now have it.) The sixth, Nídahaⁿ, Progressing toward maturity (*sic*). The seventh, He turns round and round suddenly (said of both kinds of bears).

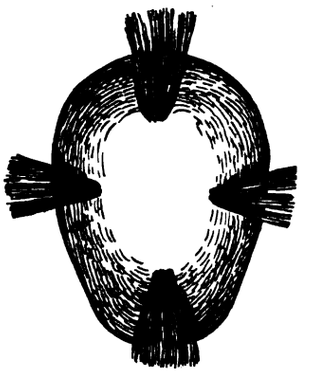


FIG. 18.—Wasabe-hit'ajĭ style of wearing the hair.

§ 45. *Sections of the subgens.*—The Wasabe-hit'ajĭ people are divided into sections. ɖaɬiⁿ-naⁿpajĭ and others told the writer that they consisted of four divisions: Black bear, Raccoon, Grizzly bear, and Porcupine people. The Black bear and Raccoon people are called brothers. And when a man kills a black bear he says, "I have killed a raccoon." The young black bear is said to cry like a raccoon, hence the birth-name Miɣa-xage. The writer is inclined to think that there is some foundation for these statements, though La Flèche and Two Crows seemed to doubt them. They gave but two divisions of the Wasabe-hit'ajĭ; and it may be that these two are the only ones now in existence, while there were four in ancient times. The two sections which are not doubted are the Wasabe-hit'ajĭ proper, and the Quɣa, *i. e.*, the Raccoon people.

When they meet as a subgens, they sit thus in their circle: The Wasabe-hit'ajĭ people sit on the right of the entrance, and the Quɣa have their places on the left. But in the tribal circle the Quɣa people

camp next to the Hañga Keepers of the Sacred Pole, as the former are the servants of the Hañga. The leader of the QuꞞa or Singers was himself the only one who acted as quꞞa, when called on to serve the Hañga. Ɽaɸiⁿ-naⁿpajĭ's half-brother, Hupeɸa, commonly styled ⱡe-ɖa-uɸiqaga, used to be the leader. Since the Omahas have abandoned the hunt, to which this office pertained, no one has acted as quꞞa; but if it were still in existence, the three brothers, Dangerous, Gihajĭ, and Maⁿ-ɸi'u-ke, are the only ones from whom the quꞞa could be chosen.

QuꞞa men.—Dried Buffalo Skull. Dangerous. Gihajĭ. Black bear. Paws the Ground as he Reclines. Young (black bear) Runs. Mandan. Hupeɸa. Laugher. Maqpiya-qaga. ⱡañga-gaxe. Crow's Head. Gray Foot. J. La Flèche said that Hupeɸa, Laugher, Maqpiya-qaga, and ⱡañga-gaxe were servants of the Elk gens; but Ɽaɸiⁿ-naⁿpajĭ, their fellow-gentile, places them among the QuꞞa. (See § 143.)

In the tribal circle the Wasabe-hit'ajĭ proper camp next to the Wajiñga-ɸatajĭ. These Wasabe-hit'ajĭ are the servants of the Elk people, whom they assist in the worship of the thunder-god. When this ceremony takes place there are a few of the QuꞞa people who accompany the Wasabe-hit'ajĭ and act as servants. These are probably the four men referred to above. Though all of the Wasabe-hit'ajĭ proper are reckoned as servants of the Wejiⁿcte, only two of them, Ɽaɸiⁿ-naⁿpajĭ and Sida-maⁿɸiⁿ, take a prominent part in the ceremonies described in §§ 23, 24. Should these men die or refuse to act, other members of their Section must take their places.

Wasabe-hit'ajĭ men.—He who fears not the sight of a Pawnee. White Earth River. Four Eyes (of a black bear). Without Gall. Progressing toward maturity. Visible (object?). Gaxekatiɸa.

QuꞞa and Wasabe-hit'ajĭ women.—Daⁿabi. Daⁿama. Land Female. Miⁿhupegɸe. Miⁿ-Ꞟaⁿiⁿge. She who is Coming back in sight. Wetaⁿne. Wete wiⁿ.

### THE WAJINGA ɸATAJĬ SUBGENS

§ 46. This name means, "They who do not eat (small) birds." They can eat wild turkeys, all birds of the miⁿxa or goose genus, including ducks and cranes. When sick, they are allowed to eat prairie chickens. When members of this subgens go on the warpath, the only sacred things which they have are the gɸedaⁿ (hawk) and nickucku (martin). (See § 196.)

*Style of wearing the hair.*—They leave a little hair in front, over the forehead, for a bill, and some at the back of the head, for the bird's tail, with much over each ear, for the wings. La Flèche and Two Crows do not deny this; but they know nothing about it.

*Curious custom during harvest.*—These Wajiñga-ɸatajĭ call themselves "The Blackbird people." In harvest time, when the birds used to eat the corn, the men of this subgens proceeded thus: They took some corn, which they chewed and spit around over the field. They thought

that such a procedure would deter the birds from making further inroads upon the crops.

Wacka$^{n}$-ma$^{n}$¢i$^{n}$ of this subgens keeps one of the great wa¢ixabe, or sacred bags, used when a warrior's word is doubted. (See § 196.)

§ 47. *Sections and subsections of the subgens.*—Waniɥa-waqĕ of the ⅃a-da gens told me that the following were the divisions of the Wajiñga-¢atajĭ; but La Flèche and Two Crows deny it. It may be that these minor divisions no longer exist, or that they were not known to the two men.

I.—Hawk people, under Standing Hawk.

II.—Mañg¢iqta, or Blackbird people, under Waji$^{n}$a-gahige. Subsections: (*a*) White heads. (*b*) Red heads. (*c*) Yellow heads. (*d*) Red wings.

III.—Mañg¢iqta-qude, Gray Blackbird (the common starling), or Thunder people, under Wa¢idaxe. Subsections: (*a*) Gray Blackbirds. (*b*) Meadow larks. (*c*) Prairie-chickens; and, judging from the analogy of the Ponka Hisada, (*d*) Martins.

IV.—Three subsections of the Owl and Magpie people are (*a*) Great Owls. (*b*) Small Owls. (*c*) Magpies.

§ 48. *Birth-names of boys.*—The first son was called, Mañg¢iqta, Blackbird. The second, Red feathers on the base of the wings. The third, White-eyed Blackbird. The fourth, Dried Wing. The fifth, Hawk (denied by La Flèche). The sixth, Gray Hawk. The seventh, White Wings. This last is a Ponka name, according to La Flèche and Two Crows.

Wajiñga-¢atajĭ *men.*—Red Wings. Chief who Watches over (any thing). Becomes Suddenly Motionless. Poor man. Standing Hawk. He from whom they flee. Rustling Horns. Scabby Horns. The one Moving towards the Dew (?). White or Jack Rabbit. Gray Blackbird. White Blackbird. Four Hands (or Paws). Ni-¢actage. Yellow Head (of a blackbird). Fire Chief. Coyote's Foot. Buffalo bull Talks like a chief. Bad temper of a Buffalo bull. White Buffalo in the distance. Hominy (a name of ridicule). He who continues Trying (commonly translated, "Hard Walker"). He who makes the crackling sound "Gh+!" in thundering. Bird Chief.

Wajiñga-¢atajĭ *women.*—(Female eagle) Is Moving On high. Moon in motion during the Day. Turning Moon Female. Mi$^{n}$daca$^{n}$-¢i$^{n}$. Mi$^{n}$-tena. Visible one that Has returned, and is in a Horizontal attitude.

### THE ⅃E-⅃A-IT'AJĬ SUBGENS.

§ 49. These are the Eagle people, and they are not allowed to touch a buffalo head. (See Iñke-sabĕ gens, §§ 30, 32.) The writer was told that their uju or head man in 1879 was Mañge-zi.

He who is the head of the Niniba t'a$^{n}$, Keepers of a (Sacred) Pipe, has duties to perform whenever the chiefs assemble in council. (See Sacred Pipes, § 18.)

The decoration of the tents in this subgens resemble those of the Iŭke-sabĕ.

§ 50. *Birth names of boys.*—The first was called Dried Eagle. ⌟a¢iⁿ-naⁿpajĭ said that this really meant "Dried buffalo skull;" but La Flèche and Two Crows denied this, giving another meaning, "Dried Eagle skin." The second was Pipe. The third, Eaglet. The fourth, Real Bald Eagle. The sixth, Standing Bald Eagle. The seventh, He (an eagle) makes the ground Shake suddenly by Alighting on it.

§ 51. *Sections of the Subgens.*—Lion gave the following, which were doubted by La Flèche and Two Crows. I. *Keepers of the Pipe*, or *Workers*, under Eaglet. II. *Under The-Only*-Hañga are Pidaiga, Wadjepa, and Maⁿze-guhe. III. *Under Real Eagle* are his son, Eagle makes a Crackling sound by alighting on a limb of a tree, Wasaapa, Gakiemaⁿ¢iⁿ, and Tcaza-¢iñge. IV. To the *Bald Eagle section* belong Yellow Breast and Small Hill. The Omahas reckon three kinds of eagles, the white eagle, the young white eagle, and the spotted eagle. To these they add the bald eagle, which they say is not a real eagle. These probably correspond with the sections of the ⌞e-da-it'ajĭ.

### THE ⌘E-'Iⁿ, OR TURTLE SUBGENS.

§ 52. This subgens camps between the ⌞e-da-it'ajĭ and the ⌘aⁿze, in the tribal circle. Its head man in 1879 was said to be ⌞enuga-jaⁿ-¢iñke. ⌘e'iⁿ means "to carry a turtle on one's back." The members of this subgens are allowed to touch or carry a turtle, but they cannot eat one.

*Style of wearing the hair.*—They cut off all the hair from a boy's head, except six locks; two are left on each side, one over the forehead, and one hanging down the back, in imitation of the legs, head, and tail of a turtle. La Flèche and Two Crows did not know about this, but they said that it might be true.

*Decoration of the tents.*—The figures of turtles were painted on the outside of the tents. (See the Iŭke-sabĕ decorations, §§ 30–32.)

*Curious custom during a fog.*—In the time of a fog the men of this subgens drew the figure of a turtle on the ground with its face to the south. On the head, tail, middle of the back, and on each leg were placed small pieces of a (red) breech-cloth with some tobacco. This they imagined would make the fog disappear very soon.

§ 53. *Birth names of boys.*—The first son was called He who Passed by here on his way back to the Water; the second, He who runs very swiftly to get back to the Water; the third, He who floats down the stream; the fourth, Red Breast; the fifth, Big Turtle; the sixth, Young one who carries a turtle on his back; the seventh, Turtle that kicks out his legs and paws the ground when a person takes hold of him.

*Sections of the subgens.*—Lion gave the following as sections of the ⌘e-'iⁿ, though the statement was denied by La Flèche and Two Crows. "The first section is Big Turtle, under ⌟ahe-ɬad'ĕ, in 1878. The sec-

ond is Turtle that does not flee, under Cage-skă or Nistu-ma$^{n}$ɸi$^{n}$. The third is Red-breasted Turtle, under ꞮenugaꞮa$^{n}$-ɸiñke. The fourth is Spotted Turtle with Red Eyes, under Ehna$^{n}$-juwagɸe."

*Turtle men.*—Heat makes (a turtle) Emerge from the mud. (Turtle) Walks Backward. He Walks (or continues) Seeking something. Ancestral Turtle. Turtle that Flees not. (Turtle that) Has gone into the Lodge (or Shell). He alone is with them. He Continues to Tread on them. Turtle Maker. Spotted Turtle with Red Eyes. Young Turtle-carrier. Buzzard. He who Starts up a Turtle.

One of the women is Egg Female.

## THE ꞬA$^{n}$ZE GENS.

§ 54. The place of the Ɡaⁿze or Kansas gens is between the Ɡe-'i$^{n}$ and the Ma$^{n}$ɸiñka-gaxe in the tribal circle. The head man of the gens who was recognized as such in 1879 was Za$^{n}$zi-mande.

*Taboo.*—The Ɡa$^{n}$ze people cannot touch verdigris, which they call "wase-ꞯu," green clay, or "wase-ꞯu-qude," gray-green clay.

Being Wind people, they flap their blankets to start a breeze which will drive off the musquitoes.

*Subgentes.*—La Flèche and Two Crows recognize but two of these: Keepers of a Pipe and Wind People. They assign to the former Maja$^{n}$ha$^{n}$ɸi$^{n}$, Maja$^{n}$-kide, &c., and to the latter Waji$^{n}$-ɸicage, Za$^{n}$zi-mandĕ, and their near kindred. But Lion said that there were four subgentes, and that Maja$^{n}$ha$^{n}$ɸi$^{n}$ was the head man of the first, or Niniba t'a$^{n}$, which has another name, Those who Make the Sacred tent. He gave Waji$^{n}$-ɸicage as the head man of the Wind people, Za$^{n}$zi-mandĕ as the head of the third subgens, and Maja$^{n}$-kide of the fourth; but he could not give the exact order in which they sat in their gentile circle.

A member of the gens told the writer that Four Peaks, whom Lion assigned to Za$^{n}$zi-mandĕ's subgens, was the owner of the sacred tent; but he did not say to what sacred tent he referred.

Some say that Maja$^{n}$ha$^{n}$ɸi$^{n}$ was the keeper of the sacred pipe of his gens till his death in 1879. Others, including Frank La Flèche, say that Four Peaks was then, and still is, the keeper of the pipe.

According to La Flèche and Two Crows, a member of this gens was chosen as crier when the brave young men were ordered to take part in the sham fight. (See § 152.) "This was Maja$^{n}$ha-ɸi$^{n}$" (*Frank La Flèche*).

§ 55. *Names of Kansas men.*—Thick Hoofs. Something Wanting. Not worn from long use. He only is great in his own estimation. Boy who talks like a chief. Young one that Flies [?]. He Lay down On the way. Young Beaver. Two Thighs. Brave Boy. Kansas Chief. Young Kansas. Making a Hollow sound. Gray Cottonwood. The one Moving toward the Land. He who shot at the Land. Young Grizzly bear.

White Grizzly bear near at hand. He started suddenly to his feet. Heartless. Chief. Four Peaks. Hair on the legs (of a buffalo calf takes) a withered appearance. Swift Wind. Wind pulls to pieces. He Walks In the Wind. Buffalo that has become Lean again. Lies at the end. Young animal Feeding with the herd. He who makes an object Fall to pieces by Punching it. Blood. He who makes them weep. Bow-wood Bow.

*Names of Kansas women.*—Kansas Female. Moon that Is traveling. Ancestral or Foremost Moon. Moon Moving On high. Last [?] Wind. Wind Female. Coming back Gray.

## THE MA$^{n}$ϕIÑKA-GAXE GENS.

§ 56. This gens, which is the first of the Ictasanda gentes, camps next to the ЧA$^{n}$ze, but on the opposite side of the road.

The chief of the gens is Cañge-skă, or White Horse, a grandson of the celebrated Black Bird.

The name Ma$^{n}$ϕiñka-gaxe means "the earth-lodge makers," but the members of this gens call themselves the Wolf (and Prairie Wolf) People.

*Tradition.*—The principal nikie of the Ma$^{n}$ϕiñka-gaxe are the coyote, the wolf, and the sacred stones. La Flèche and Two Crows say that these are all together. Some say that there are two sacred stones, one of which is red, the other black; others say that both stones have been reddened. (See §16.) La Flèche and Two Crows have heard that there were four of these stones; one being black, one red, one yellow, and one blue. (See the colors of the lightning on the tent of Agaha-wacuce, § 43.) One tradition is that the stones were made by the Coyote in ancient days to be used for conjuring enemies. The Osage tradition mentions four stones of different colors, white, black, red, and blue.

*Style of wearing the hair.*—Boys have two locks of hair left on their heads, one over the forehead and another at the parting of the hair on the crown. Female children have four locks left, one at the front, one at the back, and one over each ear. La Flèche and Two Crows do not know this, but they say that it may be true.

§ 57. *Subgentes.*—La Flèche and Two Crows gave but two of these: Keepers of the Pipe and Sacred Persons. This is evidently the classification for marriage purposes, referred to in §78; and the writer is confident that La Flèche and Two Crows always mean this when they speak of the divisions of each gens. This should be borne in mind, as it will be helpful in solving certain seeming contradictions. That these two are not the only divisions of the gens will appear from the statements of Lion and Cañge-skă, the latter being the chief of the gens. Cañge-skă said that there were three subgentes, as follows: 1. Qube (includ-

ing the Wolf people?). 2. Niniba t'aⁿ. 3. Miⁿ'xa-saⁿ wet'ájĭ. Lion gave the following: 1. Mi'ɻasi (Coyote and Wolf people). 2. Iⁿ'ĕ waqúbe, Keepers of the Sacred Stones. 3. Niníba t'aⁿ. 4. Miⁿ'xa-saⁿ wet'ájĭ. According to Cañge-skă, Qube was the name given to his part of the gens after the death of Black Bird; therefore it is a modern name, not a hundred years old. But Iⁿ'ĕ-waqúbe points to the mythical origin of the gens; hence the writer is inclined to accept the fourfold division as the ancient one. The present head of the Coyote people is ɻaqie-tig¢e, whose predecessor was Hu-¢agebe. Cañge-skă, of the second subgens, is the successor of his father, who bore the same name. Uckadajĭ is the rightful keeper of the Sacred Pipe, but as he is very old Caⁿtaⁿ-jiñga has superseded him, according to ɻa¢iⁿ-naⁿpajĭ. Miⁿxa-skă was the the head of the Miⁿxa-saⁿ wet'ajĭ, but Mañga'ajĭ has succeeded him. The name of this last subgens means "Those who do not touch swans," but this is only a name, not a taboo, according to some of the Omahas.

Among the Kansas Indians, the Maⁿyiñka-gaxe people used to include the Elk gens, and part of the latter is called, Miⁿ'xa únikaciⁿga, Swan people. As these were originally a subgens of the Kansas Maⁿyiñka-gaxe, it furnishes another reason for accepting the statement of Lion about the Omaha Miⁿxa-saⁿ-wet'ajĭ.

§ 58. *Birth-names of boys.*—ɻa¢iⁿ-naⁿpajĭ gave the following, but he did not know their exact order: He who Continues to Travel (denied by the La Flèche and Two Crows). Little Tail (of a coyote). Sudden Crunching sound (made by a coyote or wolf when gnawing bones). (Coyote) Wheels around suddenly. (Coyote) Stands erect very suddenly. Surly Wolf.

*Names of men.* I. *Wolf subgens.*—Sudden crunching sound. Wacicka. Continues Running. Wheels around suddenly. The Standing one who is Traveling. (Wolf) Makes a sudden Crackling sound (by alighting on twigs or branches). Ghost of a Grizzly bear. Stands erect Very suddenly. Little Tail. Young Traveler. He who Continues to Travel, or Standing Traveler. Standing Elk. Young animal Feeding or grazing with a herd. II. Iⁿ'ĕ-waqube *subgens.*—White Horse. Ancestral Kansas. Thunder-god. Village-maker. Brave Second-son. Black Bird (*not* Blackbird). Big Black bear. White Swan. Night Walker. He whom they Reverence. Big Chief. Walking Stone. Red Stone. ɻa¢iⁿ-naⁿpajĭ said that the last two names were birth-names in this subgens. III. Niniba-t'aⁿ *subgens.*—He who Rushes into battle. Young Wolf. Saucy Chief. IV. *Swan subgens.*—He whom an Arrow Fails to wound. Willing to be employed. A member of this gens, Tailless Grizzly bear, has been with the Ponkas for many years. His name is not an Omaha name.

*Names of women.*—Hawk-Female. New Hawk-Female. Miacte-ctaⁿ, or Miate-ctaⁿ. Miⁿ-miɻega. Visible Moon. (Wolf) Stands erect. White Ponka in the distance. Ponka Female. She who is Ever Coming back Visible. Eagle Circling around. Wate wiⁿ.

## THE ᒪE-SĬNDE GENS.

§ 59. The ᒪe-sĭnde, or Buffalo-tail gens, camps between the Maⁿ¢iñkagaxe and the ᒪa-da gentes in the tribal circle. Its present chief is Wahaⁿ-¢iñge, son of Takunaki¢abi.

*Taboos.*—The members of this gens cannot eat a calf while it is red, but they can do so when it becomes black. This applies to the calf of the domestic cow, as well as to that of the buffalo. They cannot touch a buffalo head.—*Frank La Flèche.* (See §§ 31, 37, and 49.) They cannot eat the meat on the lowest rib, ɹe¢iɹ-ucag¢e, because the head of the calf before birth touches the mother near that rib.

*Style of wearing the hair.*—It is called "ᒪáihiⁿ-múxa-gáxai," *Mane made muxa, i. e.*, to stand up and hang over a little on each side. La Flèche and Two Crows do not know this style.

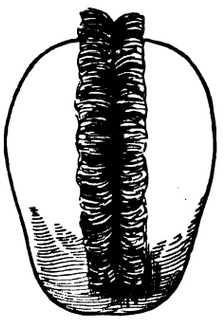


FIG. 19.—ᒪe-sĭnde style of wearing the hair.

§ 60. *Birth-names of boys.*—ᒧa¢iⁿ-naⁿpajĭ was uncertain about them. He thought that six of them were as follows: Gray Horns (of a buffalo). Umaabi, refers to cutting up a buffalo. (A buffalo that is almost grown) Raises his Tail in the air. Dark Eyes) A buffalo calf when it sheds its reddish-yellow hair, has a coat of black, which commences at the eyes). (Buffalo Calf) Unable to Run. Little one (buffalo calf) with reddish-yellow hair.

§ 61. *Subgentes.*—For marriage purposes, the gens is undivided, according to La Flèche and Two Crows; but they admitted that there were at present two parts of the gens, one of which was The Keepers of the Pipe. Lion said that he knew of but two subgentes, which were The Keepers of the Pipe, or, Those who do not Eat the Lowest buffalo rib, under Wild sage; and Those who Touch no Calves, or, Keepers of the Sweet Medicine, under Orphan. J. La Flèche said that all of the ᒪe-sĭnde had the sweet medicine, and that none were allowed to eat calves.

§ 62. *Names of men.*—Wild Sage. Stands in a High and marshy place. Smoke Coming back Regularly. Big ax. (Buffalo) Bristling with Arrows. Ancestral Feather. Orphan, or, (Buffalo bull) Raises a Dust by Pawing the Ground. Unable to run. (Body of a buffalo) Divided with a knife. Playful (?) or Skittish Buffalo. Little one with reddish-yellow hair. Dark Eyes. Lies Bottom-upwards. Stands on a Level. Young Buffalo bull. Raises his Tail in the air. Lover. Crow Necklace. Big Mane. Buffalo Head. He who is to be blamed for evil.

*Nomes of women.*—Miⁿ-akanda. Sacred Moon. White Buffalo-Female in the distance. Walks in order to Seek (for something).

## THE ɮA-ɖA OR DEER-HEAD GENS.

§ 63. The place of this gens in the tribal circle is after that of the ɮe-sĭnde. The chief of the gens is Sĭnde-xaⁿxaⁿ.

*Taboo.*—The members of this gens cannot touch the skin of any animal of the deer family; they cannot use moccasins of deer-skin; nor can they use the fat of the deer for hair-oil, as the other Omahas can do; but they can eat the flesh of the deer.

*Subgentes.*—La Flèche and Two Crows recognized three divisions of the gens for marriage purposes, and said that the Keepers of the Sacred Pipe were "uɴaⁿha jiñga," *a little apart from the rest.* Waniɴa-waqĕ, who is himself the keeper of the Sacred Pipe of this gens, gave four subgentes. These sat in the gentile circle in the following order: On the first or left side of the "fire-place" were the Niniba t'aⁿ, *Keepers of the Pipe*, and Jiñga-gahige's subgens. On the other side were the Thunder people and the real Deer people. The Keepers of the Pipe and Jiñga-gahige's subgens seem to form one of the three divisions recognized by La Flèche. Waniɴa-waqĕ said that his own subgens were Eagle people, and that they had a special taboo, being forbidden to touch verdigris (see Ɪaⁿze gens), charcoal, and the skin of the wild-cat. He said that the members of the second subgens could not touch charcoal, in addition to the general taboo of the gens. But La Flèche and Two Crows said that none of the ɮa-ɖa could touch charcoal.

The head of the Niniba t'aⁿ took the name Waniɴa-waqĕ, The Animal that excels others, or Lion, after a visit to the East; but his real Omaha name is Disobedient. ɖaɬiⁿ-gahige is the head of the Thunder subgens, and Sĭnde-xaⁿxaⁿ, of the Deer subgens.

§ 64. *Birth-names for boys.*—Lion said that the following were some of the Eagle birth-names of his subgens (see Iñke-sabĕ birth-names, § 32): The thunder-god makes the sound "ɴide" as he walks. Eagle who is a chief (keeping a Sacred Pipe). Eagle that excels. White Eagle (Golden Eagle). Akida-gahige, Chief who Watches over something (being the keeper of a Sacred Pipe).

He gave the following as the Deer birth-names: He who Wags his Tail. The Black Hair on the Abdomen of a Buck. Horns like phalanges. Deer Paws the Ground, making parallel or diverging indentations. Deer in the distance Shows its Tail White Suddenly. Little Hoof of a deer. Dark Chin of a deer.

§ 65. *Ceremony on the fifth day after a birth.*—According to Lion, there is a peculiar ceremony observed in his gens when an infant is named. All the members of the gens assemble on the fifth day after the birth of a child. Those belonging to the subgens of the infant cannot eat anything cooked for the feast, but the men of the other subgentes are at liberty to partake of the food. The infant is placed within the gentile circle and the privileged decoration is made on the face of the child

with "wase-jide-nika," or Indian red. Then with the tips of the index, middle, and the next finger, are red spots made down the child's back, at short intervals, in imitation of a fawn. The child's breech-cloth (*sic*) is also marked in a similar way. With the tips of three fingers are rubbed stripes as long as a hand on the arms and chest of the infant. All the ⌊a-da people, even the servants, decorate themselves. Rubbing the rest of the Indian red on the palms of their hands, they pass their hands backwards over their hair; and they finally make red spots on their chests, about the size of a hand. The members of the Pipe subgens, and those persons in the other subgentes who are related to the infant's father through the calumet dance, are the only ones who are allowed to use the privileged decoration, and to wear hi"qpe (*down*) in their hair. If the infant belongs to the Pipe subgens, charcoal, verdigris, and the skin of a wild-cat are placed beside him, as the articles not to be touched by him in after-life. Then he is addressed thus: "This you must not touch; this, too, you must not touch; and this you must not touch." The verdigris symbolizes the blue sky.

La Flèche and Two Crows said that the custom is different from the above. When a child is named on the fifth day after birth, all of the *gentiles* are not invited, the only person who is called is an old man who belongs to the subgens of the infant.[5] He puts the spots on the child, and gives it its name; but there is no breech-cloth.

§ 66. *Names of men.* I. *Pipe subgens.*—Chief that Watches over something. Eagle Chief. Eagle that excels, or Eagle-maker (?). Wags his Tail. Standing Moose or Deer. (Lightning) Dazzles the Eyes, making them Blink. Shows Iron. Horns Pulled around (?). Forked Horns. (Fawn that) Does not Flee to a place of refuge. (Deer) Alights, making the sound "stapi." Pawnee Tempter, a war name. White Tail. Gray Face. Like a Buffalo Horn (?). Walks Near. Not ashamed to ask for anything. (Fawn) Is not Shot at (by the hunter). White Breast. Goes to the Hill. Elk.

II. *Boy Chief's subgens.*—Human-male Eagle (a Dakota name, J. La Flèche). Heart Bone (of a deer; some say it refers to the thunder; J. La Flèche says that it has been recently brought from the Kansas). Fawn gives a sudden cry. Small Hoofs. Dark Chin. Forked Horns. (Deer) Leaps and raises a sudden Dust by Alighting on the ground. He who Wishes to be Sacred (or a doctor). Flees not. Forked Horns of a Fawn.

III. *Thunder subgens.*—Spotted Back (of a fawn). Small Hoofs. Like a Buffalo Horn. Wet Moccasins (that is, the feet of a deer. A female name among the Osages, etc.). Young Male-animal. White Tail. Dazzles the Eyes. Spoken to (by the thunder-god). Young Thunder-god. Dark Chin. Forked Horns. Distant Sitting one with White Horns. Fawn. Paws the Ground, making parallel or diverging indentations.

[5] This agrees substantially with the Osage custom.

Black Hair on a buck's Abdomen. Two Buffalo bulls. Red Leaf (a Dakota name). Skittish. Black Crow. Weasel. Young Elk. Pawnee Chief.

IV. *Deer subgens.*—(Deer's) Tail shows red, now and then, in the distance. White-horned animal Walking Near by. White Neck. Tail Shows White Suddenly in the distance. (Deer) Stands Red. (Deer) Starts up, beginning to move. Big Deer Walks. (Deer that) Excels others as he stands, or, Stands ahead of others. Small Forked Horns (of a fawn). Four Deer. Back drawn up (as of an enraged deer or buffalo), making the hair stand erect. Four Hoofs. He who Carves an animal. Shows a Turtle. Runs in the Trail (of the female). (Fawn) Despised (by the hunter, who prefers to shoot the full-grown deer). Feared when not seen. White Elk.

Lion said that White Neck was the only servant in his gens at present. When the gens assembled in its circle, the servants had to sit by the door, as it was their place to bring in wood and water, and to wait on the guests. La Flèche and Two Crows said that there were no servants of this sort in any of the gentes.

Yet, among the Osages and Kansas, there are still two kinds of servants, kettle-tenders and water-bringers. But these can be promoted to the rank of brave men.

*Names of women in the gens.*—Eɔna-maha. Habitual-Hawk Female. Hawk Female. Precious Hawk Female. Horn used for cutting or chopping (?). Ax Female. Moon-Hawk Female. Moon that is Flying. Moon that Is moving On high. Na$^{n}$zéi$^{n}$ze. White Ponka in the distance. Ponka Female.

## THE IÑG¢E-JIDE GENS.

§ 67. The meaning of this name has been explained in several ways. In Dougherty's Account of the Omahas (*Long's Expedition to the Rocky Mountains*, I, 327) we read that "This name is said to have originated from the circumstance of this band having formerly quarreled and separated themselves from the nation, until, being nearly starved, they were compelled to eat the fruit of the wild cherry tree, until their excrement became red". (They must have eaten buffalo berries, not wild cherries. La Flèche.) A$^{n}$ba-hebe did not know the exact meaning of the name, but said that it referred to the bloody body of the buffalo seen when the seven old men visited this gens with the sacred pipes. (See § 16). Two Crows said that the Iñg¢ejide men give the following explanation: "⅃éjiñga ídai tĕdi, iñg¢é zí-jide éga$^{n}$": *i. e.*, "When a buffalo calf is born, its dung is a yellowish red."

The place of the Iñg¢e-jide in the tribal circle is next to that of the ⅃a-da. Their head man is He-musnade.

*Taboo.*—They do not eat a buffalo calf. (See ⌊e-sínde gens.) It appears that the two Ictasanda buffalo gentes are buffalo calf gentes, and that the two Hañgacenu buffalo gentes are connected with the grown buffalo.

*Decoration of skin tents.*—This consists of a circle painted on each side of the entrance, within which is sketched the body of a buffalo calf, visible from the flanks up. A similar sketch is made on the back of the tent.

§ 68. *Birth names of boys.*—These are as follows, but their exact order has not been gained: Buffalo calf. Seeks its Mother. Stands at the End. Horn Erect with the sharp end toward the spectator. Buffalo (calf?) Rolls over. Made dark by heat very suddenly. Ma$^{n}$zeda$^{n}$, meaning unknown.

*Subgentes.*—The Iñg¢e-jide are not divided for marriage purposes. Lion, however, gave four subgentes; but he could not give the names and taboos. He said that *Horn Erect* was the head of the first. The present head of the second is *Little Star*. *Rolls over* is the head of the third; and *Singer* of the fourth.

*Names of men.*—Walking Buffalo. Buffalo Walks a little. (Buffaloes) Continue Approaching. Tent-poles stuck Obliquely in the ground. Becomes Cold suddenly. Hawk Temper. Bad Buffalo. (Buffalo calf) Seeks its Mother. (Buffalo bull) Rolls over. Stands at the End. Singer. Crow Skin. Small Bank. Kansas Head. Rapid (as a river). Sacred Crow that speaks in Visions. White Feather. Walks at the End.

*Names of women.*—Moon-Hawk Female. Moon Horn Female. (Buffaloes) Make the ground Striped as they run. Walks, seeking her own.

## THE ICTASANDA GENS.

§ 69. The meaning of "Ictasanda" is uncertain; though Say was told by Dougherty that it signifies "gray eyes." It probably has some reference to the effect of lightning on the eyes. The place of the Ictasanda is at the end of the tribal circle, after the Iñg¢e-jide, and opposite to the Weji$^{n}$cte. The head of the gens is Ibaha$^{n}$bi, son of Wanuxige, and grandson of Wacka$^{n}$hi.

*Taboo.*—The Ictasanda people do not touch worms, snakes, toads, frogs, or any other kinds of reptiles. Hence they are sometimes called the "Wag¢ícka níkaci$^{n}$'ga," or Reptile people. But there are occasions when they seem to violate this custom. If worms trouble the corn after it has been planted, these people catch some of them. They pound them up with a small quantity of grains of corn that have been heated. They make a soup of the mixture and eat it, thinking that the corn will not be troubled again—at least for the remainder of that season.

§ 70. *Birth names of boys.*—Ibaha$^{n}$bi said that the first son was called

Gaagig¢e-hna$^{n}$, which probably refers to thunder that is passing by. The second is, The Thunder-god is Roaring as he Stands. The third, Big Shoulder. The fourth, Walking Forked-lightning. The fifth, The thunder-god Walks Roaring. The sixth, Sheet-lightning Makes a Glare inside the Lodge. The seventh, The Thunder-god that Walks After others at the close of a storm.

*Birth names of girls.*—The first is called The Visible (Moon) in Motion. The second, The Visible one that has Come back and is in a Horizontal attitude. The third, Zizika-wate, meaning uncertain; refers to wild turkeys. The fourth, Female (thunder?) who Roars. The fifth, She who is Ever Coming back Visibly (referring to the moon?). The sixth White Eyed Female in the distance. The seventh, Visible ones in different places.

§ 71. *Subgentes.*—For marriage purposes the gens is divided into three parts, according to La Flèche and Two Crows. I. Niniba-t'a$^{n}$, Keepers of the Pipe, and Real Ictasanda, of which ⅃e-uꓘa$^{n}$ha, ꓘawaha, Waji$^{n}$-a$^{n}$ba, and Si-¢ede-jiñga are the only survivors. II. Waceta$^{n}$, or Reptile people, under Ibaha$^{n}$bi. III. Ing¢a$^{n}$, Thunder people, among who are Ui¢a$^{n}$be-a$^{n}$sa and Wanace-jiñga.

Lion divided the gens into four parts. I. Niniba-t'a$^{n}$, under ⅃e-uꓘa$^{n}$ha. II. Real Ictasanda people, under Waji$^{n}$-a$^{n}$ba. III. Waceta$^{n}$ (referring to the thunder, according to Lion, but denied by Two Crows), Reptile people, under Ibaha$^{n}$bi. These are sometimes called Keepers of the Claws of the Wild-cat, because they bind these claws to the waist of a new-born infant, putting them on the left side. IV. The Real Thunder people are called, Those who do not touch the Clam shell, or, Keepers of the Clam shell, or, Keepers of the Clam shell and the Tooth of a Black bear. These bind a clam shell to the waist of a child belonging to this subgens, when he is forward in learning to walk. (See §§ 24, 43, 45, and 63.)

At the time that Waniꞁa-waqĕ gave this information, March, 1880, he said that there were but two men left in the Niniba-t'a$^{n}$, ⅃e-uꓘa$^{n}$ha, and ꓘawaha. Now it appears that they have united with Waji$^{n}$-a$^{n}$ba and Si¢ede-jiñga, the survivors of the Ictasandaqti. ⅃e-uꓘa$^{n}$ha, being the keeper of the Ictasanda sacred pipe, holds what was a very important office, that of being the person who has the right to fill the sacred pipes for the chiefs. (See §§ 17 and 18.) ⅃e-uꓘa$^{n}$ha does not, however, know the sacred words used on such occasions, as his father, Mahi$^{n}$zi, died without communicating them to him.

But some say that there is another duty devolving on this keeper. There has been a custom in the tribe not to cut the hair of children when they were small, even after they began to walk. But before a child reached the age of four years, it was necessary for it to be taken, with such other children as had not had their hair cut, to the man who filled the sacred pipes. Two or three old men of the Ictasanda gens sat together on that occasion. They sent a crier around the camp or vil-

lage, saying, "You who wish to have your children's hair cut bring them." Then the father, or else the mother, would take the child, with a pair of good moccasins for the child to put on, also a present for the keeper of the sacred pipe, which might consist of a pair of moccasins, some arrows, or a dress, etc. When the parents had arrived with their children each one addressed the keeper of the pipe, saying, "Venerable man, you will please cut my child's hair," handing him the present at the same time. Then the old man would take a child, cut off one lock about the length of a finger, tie it up, and put it with the rest in a sacred buffalo hide. Then the old man put the little moccasins on the child, who had not worn any previously, and after turning him around four times he addressed him thus: "Ucpáha, Wakan'da ¢a'é¢i¢é-de ɣáci ma$^{n}$¢iñ'ka si á¢ag¢é taté—*Grandchild, may Wakanda pity you, and may your feet rest for a long time on the ground!*" Another form of the address was this: "Wakan'da ¢a'é¢i¢e taté! Ma$^{n}$¢iñ'ka si á¢ag¢é taté. Gúdihéga$^{n}$ hné taté!—*May Wakanda pity you! May your feet tread the ground! May you go ahead* (*i. e.*, may you live hereafter)!" At the conclusion of the ceremony the parent took the child home, and on arriving there the father cut off the rest of the child's hair, according to the style of the gens. La Flèche told the following, in 1879: "If it was desired, horns were left, and a circle of hair around the head, with one lock at each side, over the ear. Some say that they cut off more of the hair, leaving none on top and only a circle around the head." But the writer has not been able to ascertain whether this referred to any particular gens, as the Ictasanda or to the whole tribe. "It is the duty of Waji$^{n}$-a$^{n}$ba, of the Real Ictasanda, to cut the children's hair. The Keepers of the Pipe and the Real Ictasanda were distinct subgentes, each having special duties." (*Frank La Flèche.*)

§ 72. *Names of men.*—Ue-uɣa$^{n}$ha (Sentinel Buffalo Apart from the herd) and his brother, Ɣawaha, are the only survivors of the *Keepers of the Pipe.* Hañga-cenu and Mahi$^{n}$-zi (Yellow Rock) are dead.

II. *Real Ictasanda people.*—Waji$^{n}$-a$^{n}$ba and Small Heel are the only survivors. The following used to belong to this subgens: Reptile Catcher. (Thunder-god) Threatens to strike. Wishes to Love. Frog. (Thunder) Makes a Roar as it Passes along. Night Walker. Runs (on) the Land. Sacred Mouth. Soles of (gophers') Paws turned Outward. The Reclining Beaver. Snake. Touched the distant foe. Rusty-yellow Corn-husk (an Oto name). Young Black bear. He who Boiled a Little (a nickname for a stingy man). Small Fireplace. He who Hesitates about asking a favor. Maker of a Lowland forest. Stomach Fat.

III. Waceta$^{n}$ *subgens.*—Roar of approaching thunder. He who made the foe stir. He who tried to anticipate the rest in reaching the body of a foe. Cedar Shooter. Flat Water (the Platte or Nebraska). He is Known. Thunder-god) Roars as he Stands. Sharp Stone. (Thunder that) Walks after the others at the close of a storm. Big Shoulder. (Thunder) Walks On high. Wace-jiñga (Small Reptile?)

Wace-ta$^{n}$ (Standing Reptile ?.) Wace-ta$^{n}$-jiñga (Small Standing Reptile ?). (Snake) Makes himself Round. Sheet-lightning Flashes Suddenly. Forked-lightning Walks. Thunder makes he sound "z+!" Black cloud in the horizon. Walks during the Night. White Disposition (or, Sensible). Sole of the foot. He got the better of the Lodges (of the foe by stealing their horses). Ibaha$^{n}$bi (He is Known) gave the following as names of Ictasanda men, but J. La Flèche and Two Crows doubt them. Large Spotted Snake. (Snake) Makes (a frog) Cry out (by biting him).[6] Small Snake.[6] (Snake) Lies Stiff. Big Mouth. Black Rattlesnake. (Snake that) Puffs up itself.

IV. *Thunder subgens.*—Sheet-lightning Flashes inside the Lodge. Swift at Running up a hill. Young Policeman. Cloud. He Walks with them. He who Is envied because he has a pretty wife, a good horse, etc., though he is poor or homely.

*Names of women.*—Da$^{n}$ama. She Alone is Visible. Skin Dress. She who Is returning Roaring or Bellowing. She who is made Muddy as she Moves. Moon has Returned Visible. Moon is Moving On high.[7]

[6] These names are found in the corresponding Ponka gens, the Wajaje or Osage, a reptile gens.

[7] Many names have been omitted because an exact translation could not be given, though the references to certain animals or mythical ancestors are apparent. It is the wish of the writer to publish hereafter a comparative list of personal names of the cognate tribes, Omahas, Ponkas, Osages, Kansas, and Kwapas, for which considerable material has been collected.

# CHAPTER IV.

## THE KINSHIP SYSTEM AND MARRIAGE LAWS.

### CLASSES OF KINSHIP.

§ 73. Joseph La Flèche and Two Crows recognize four classes of kinship:

1. Consanguineous or blood kinship, which includes not only the gens of the father, but also those of the mother and grandmothers.

2. Marriage kinship, including all the affinities of the consort, as well as those of the son's wife or daughter's husband.

3. Weawaⁿ kinship, connected with the Calumet dance. (See § 126.)

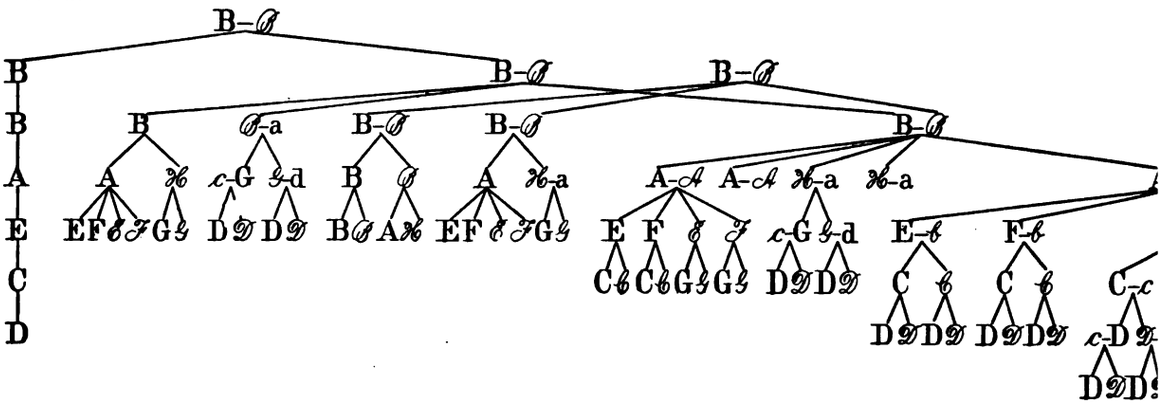
4. Inter-gentile kinship, existing between contiguous gentes. This last is not regarded as a bar to intermarriage, *e. g.*, the Wejiⁿcte and Iŋke-sabĕ gentes are related; and the Wejiⁿcte man whose tent is at the end of his gentile area in the tribal circle is considered as a very near kinsman by the Iŋke-sabĕ man whose tent is next to his. In like manner, the Iŋke-sabĕ Waɸigije man who camps next to the Haŋga gens is a brother of his nearest Haŋga neighbor. The last man in the Haŋga area is the brother of the first ɸatada (Wasabe-hit'ajĭ), who acts as Quɣa for the Haŋga. The last ɸatada ɣe-'iⁿ man is brother of the first ɣaⁿze man, and so on around the circle.

Two other classes of relationship were given to the writer by members of three tribes, Omahas, Ponkas, and Missouris, but Joseph La Flèche and Two Crows never heard of them. The writer gives authorities for each statement.

5. Nikie kinship. "Nikie" means "Something handed down from a mythical ancestor," or "An ancient custom." Nikie kinship refers to kinship based on descent from the same or a similar mythical ancestor. For example, Big Elk, of the Omaha Wejiⁿcte or Elk gens, told the writer that he was related to the Kansas Elk gens, and that a Wejiⁿcte man called a Kansas Elk man "My younger brother," the Kansas man calling the Wejiⁿcte "My elder brother."

Ictaɸabi, an Iŋke-sabĕ, and Ckátce-yiŋ'e, of the Missouri tribe, said that the Omaha Wejiⁿcte calls the Oto Hótatci (Elk gens) "Elder brother." But Big Elk did not know about this. He said, however, that his gens was related to the Ponka Niɣaɗaǫna, a deer and elk gens.

Ictaɸabi said that Omaha Iŋke-sabĕ, his own gens, calls the Ponka ɸixida "Grandchild"; but others say that this is owing to intermarriage. Ictaɸabi also said that Iŋke-sabĕ calls the Ponka Wajaje "Elder brother"; but some say that this is owing to intermarriage. Gahige,




L

♀ EGO, a male.

A Father group. Iⁿdadi, *my father.*

𝒜 Mother group. Iⁿnaⁿha, *my mother.*

B Grandfather group. Wiɨigaⁿ *my grandfather.*

ℬ Grandmother group. Wiɨaⁿ, *my grandmother.*

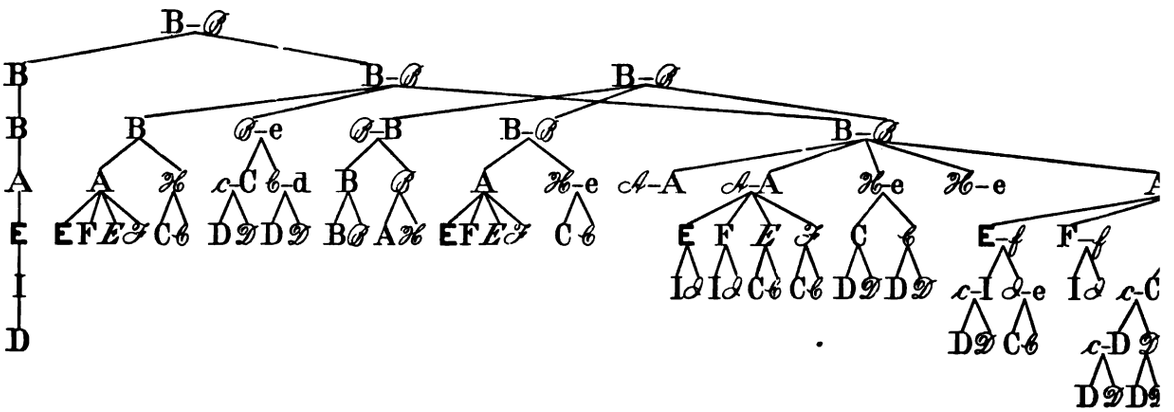
C Son group. Wijiñge, *my son.*

𝒞 Daughter group. Wijañge, *my daughter.*

D—𝒟 Grandchild group. Wiɨucpa, *my grandchild.* N. B.—D denotes a grandson, and 𝒟, a granddaughter.

E Elder brother group. Wijiⁿɬe, *my elder brother.*

F Younger brother group. Wisañga, *my younger brother.*




Le

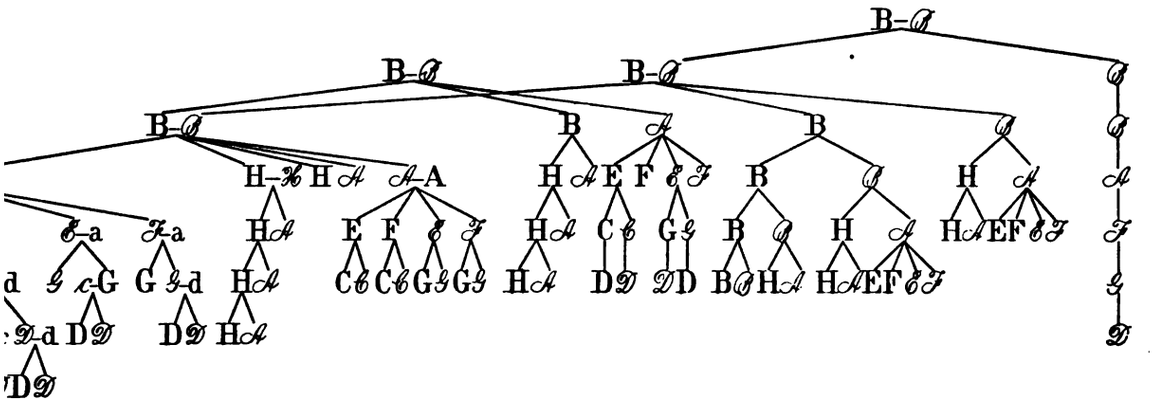
♀ EGO, a female. A, 𝒜, B, ℬ, C, 𝒞, D, 𝒟, F, H, and 𝒦 as above.

E Elder brother group. Wiɨinu, *my elder brother.*

*E* Elder sister group. Wijaⁿɬe, *my elder sister.*

ℱ Younger sister group. Wiɨañge, *my younger sister.*

I Brother's son group. Wiɨucka, *my brother's son.*



E–F Sister group. Wiɬañge, *my sister*. This term is also used by EGO, a female, for "My younger sister"; but EGO, a male, does not distinguish between elder sister (E) and younger sister (F).

G Sister's son group. Wiɬaⁿcka, *my sister's son*.

g Sister's daughter group. Wiɬijaⁿ, *my sister's daughter*.

H Mother's brother group. Winegi, *my mother's brother*.

h Father's sister group. Wiɬimi, *my father's sister*.

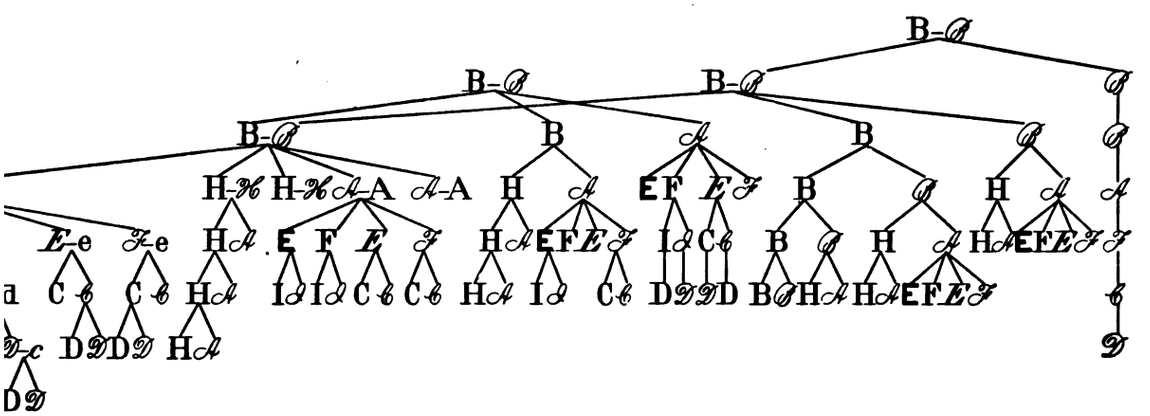
Affinity groups in this part of the plate:

a Wife's brother or sister's husband group. Wiɬahaⁿ, *my brother-in-law*.

b Wife's sister or brother's wife group. Wihañga, *my potential wife*.

c Son's wife group. Wiɬini, *my son's wife*.

d Daughter's husband group. Wiɬande, *my daughter's husband*.



I Brother's daughter group. Wiɬujañge, *my brother's daughter*.

Affinity groups in this part of the plate:

See above for explanation of c and d.

e Husband's brother group. Wiciʻe, *my potential husband*.

f Husband's sister group. Wiciɬaⁿ, *my husband's sister*.

of the Iñke-sabĕ gens, calls Standing Grizzly bear of the Ponka Wajaje his grandchild; and Standing Buffalo, of the same gens, his son. So Ictaɕabi's statement was incorrect.

Ictaɕabi and Ckatce-yiñe said that Iñke-sabĕ calls the Oto Arúqwa, or Buffalo gens, "Grandfather;" and that the Oto Rútce or Pigeon gens is called "Grandchild" by Iñke-sabĕ.

Some said that the Omaha Wasabe-hit'ajĭ called the Ponka Wasabe-hit'ajĭ "Grandchild"; but ⊿áɕi$^{n}$-na$^{n}$pájĭ, of the Omaha Wasabe-hit'ajĭ, said that his subgens called the Ponka Wasabe-hit'ajĭ "Younger brother"; and ɸixida and Wajaje "Grandfather." Húpeɕa, another member of the Omaha Wasabe-hit'ajĭ, said that Ubískă of the Ponka Wasabe-hit'ajĭ was his son; Ubískă's father, his elder brother (by marriage); and Ubískă's grandfather his (Hupeɕa's) father. He also said that he addressed as elder brothers all Ponka men older than himself, and all younger than himself he called his younger brothers.

Fire Chief of the Omaha Wajiñga-ɕatajĭ said that he called Keɣréδe, of the Oto Tuna$^{n}$'p'i$^{n}$ gens, his son; the Ponka Wasabe-hit'ajĭ, his elder brother; the Kansas Wasabe and Miɣa, his fathers; the Kansas Eagle people, his fathers; the Kansas Turtle people, his elder brothers; the Oto Rútce (Pigeon people), his fathers; the Oto Makátce (Owl people), his sisters' sons; and the Winnebago Ho$^{n}$tc (Black bear people), his fathers.

Omaha Ma$^{n}$ɕiñka-gaxe calls Yankton-Dakota Tcaxú, "Sister's sons," but Tcañ'kuté, Ihá-isdáye, Watcéu$^{n}$pa, and Ikmu$^{n}$', are "Grandsons."

⊥a-da calls Oto ⊥oéxita (Eagle people) "Grandchildren"; and Ponka Hísada "Grandfathers."

Ictaɕabi said that Ictasanda called Ponka Maka$^{n}$' "Mother's brother"; but Ibaha$^{n}$bi, of the Ictasanda gens, denied it. Ibaha$^{n}$bi said that he called a member of a gens of another tribe, when related to him by the nikie, "My father," if the latter were very old; "My elder brother," if a little older than himself, and "My younger brother," if the latter were Ibaha$^{n}$bi's junior. Besides, Ibaha$^{n}$bi takes, for example, the place of Standing Bear of the Ponka Wajaje; and whatever relationship Standing Bear sustains to the Hisada, ɸixida, Nikadaona, etc., is also sustained to the members of each gens by Ibaha$^{n}$bi.

6. Sacred Pipe kinship. Gahige, of the Omaha Iñke-sabĕ, said that all who had sacred pipes called one another "Friend." Ponka Wacabe and Omaha Iñke-sabĕ speak to each other thus. But Joseph La Flèche and Two Crows deny this.

### CONSANGUINEOUS KINSHIP.

§74. All of a man's consanguinities belong to fourteen groups, and a woman has fifteen groups of consanguinities. Many affinities are addressed by consanguinity terms; excepting these, there are only four groups of affinities. In the accompanying charts consanguinities are designated by capital letters and affinities by small letters. Roman letters denote males and script letters females. Some necessary exceptions to these rules are shown in the Legends.

§ 75. *Peculiarities of the Charts.*—The most remote ancestors are called grandfathers and grandmothers, and the most remote descendant is addressed or spoken of as a grandchild.

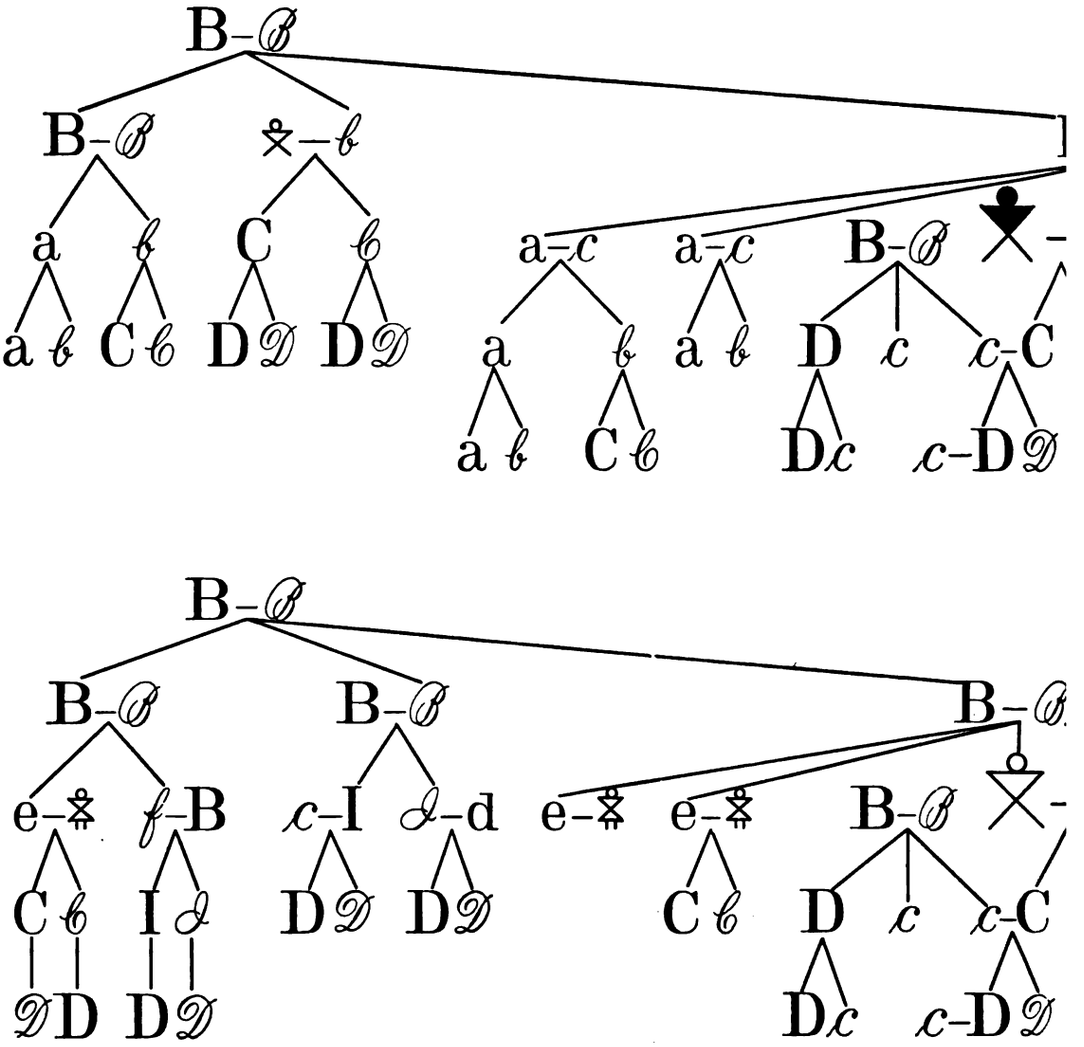
My brother's children (male speaking) are my children, because their mother () can become my wife on the death of their father. My brother's son (I) and daughter (), female speaking, are my nephews and nieces. A man calls his sister's children his nephews and nieces (G and ), and they do not belong to his gens.

A woman calls her sister's children her own children, as their father can be her husband. (See "*e.*") My mother's brother's son (m. or f. sp.) is my mother's brother (H), because his sister () can be my father's wife. The son of an "H" is always an "H" and his sisters and daughters are always "'s." The children of 's are always brothers and sisters to Ego (m. or f.), as are the children of A's. The husband of my father's sister (m. sp.) is my brother-in-law (a) because he can marry my sister ( or ), and their children are my sister's children (G and ""). A brother of the real or potential wife of a grandfather is also a grandfather of Ego (m. or f.). The niece of the real or potential wife of my grandfather (m. or f. sp.) is his potential wife and my grandmother, so her brother is my grandfather.

§ 76. From these examples and from others found in the charts, it is plain that the kinship terms are used with considerable latitude, and not as we employ them. Whether Ego be a male or female, I call all men my fathers whom my father calls his brothers or whom my mother calls her potential husbands. I call all women my mothers whom my mother calls her sisters, aunts, or nieces, or whom my father calls his potential wives.

I call all men brothers who are the sons of such fathers or mothers, and their sisters are my sisters. I call all men my grandfathers who are the fathers or grandfathers of my fathers or mothers, or whom my fathers or mothers call their mothers' brothers. I call all women my grandmothers who are the real or potential wives of my grandfathers, or who are the mothers or grandmothers of my fathers or mothers, or whom my fathers or mothers call their fathers' sisters.

I, a male, call all males my sons who are the sons of my brothers or of my potential wives, and the sisters of those sons are my daughters. I, a female, call those males my nephews who are the sons of my brothers, and the daughters of my brothers are my nieces; but my sister's children are my children as their father is my potential or actual husband. I, a male, call my sister's son my nephew, and her daughter is my niece. I, a male or female, call all males and females my grandchildren who are the children of my sons, daughters, nephews, or nieces. I, a male or female, call all men my uncles whom my mothers call their brothers. And my aunts are all females who are my fathers' sisters as well as those who are the wives of my uncles. But my father's sisters' husbands, I being a male, are my brothers-in-law, being the potential







Leg

Affinities of ♀ EGO, a male:

♀ Wigaqɬaⁿ, *my wife.*

a Wife's brother group. Wiɻáhaⁿ, *my wife's brother.*

*b* Wife's sister group. Wihañ'ga, *my potential wife.*

Though "My wife's mother's sister's husband" is wiɻigaⁿ, *my grandfather* (see B*), that term, as applied to him, is seemingly without reason.—Joseph La Flèche.

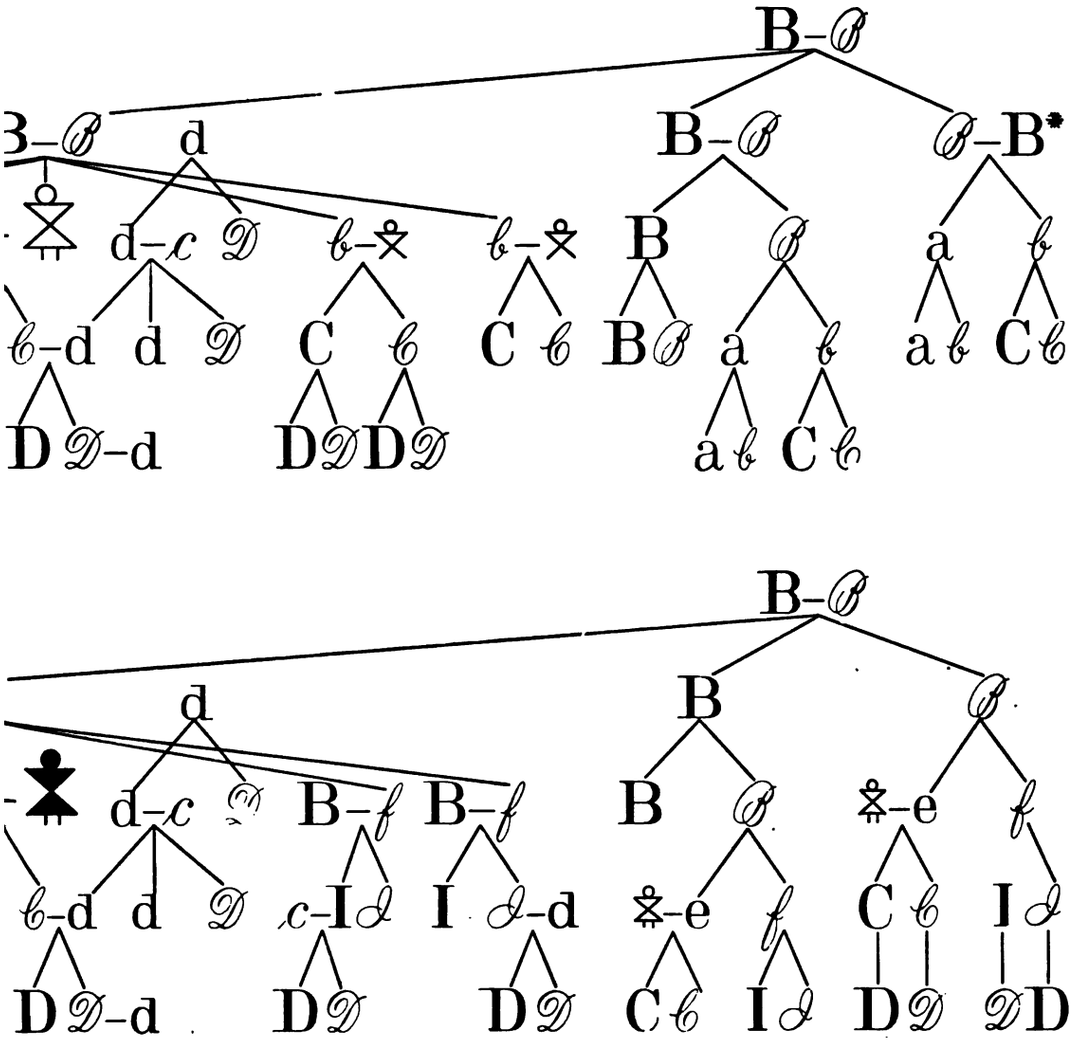
The husband of my wife's sister (*b*) is not always my consanguinity, but if he is a kinsman, I call him my elder (E) or younger (F) brother.

Affinities of ♀ EGO, a female:

♀ Wíegɬañge, *my husband.*

e Husband's brother group. Wíci'e, *my potential husband.*

*f* Husband's sister group. Wicíɻaⁿ, *my husband's sister.*



*nd.*

The wife of "e" is my sister (wijaⁿ̨e *or* wi ɻañge), my father's sister (wiɻimi), or my brother's daughter (wiɻɳjañge), if related to Ego, a female. This kinship will be expressed by *E*, *F*, *N*, or *L*, according to circumstances. See ɻ in the chart.

Affinities common to both sexes:

B Grandfather group. Wiɻigaⁿ, *my grandfather.*

*B* Grandmother group. Wiɻaⁿ, *my grandmother.*

*e* Son's wife group. Wiɻini, *my son's wife.*

d Daughter's husband group. Wiɻande, *my daughter's husband.*

C Son group. Wijiñge, *my son.*

*C* Daughter group. Wijañge *my daughter.*

D—*D* Grandchild group. Wiɻucpa, *my grandchild* (D, if male; *D*, if female).

or real husbands of my sisters; and they are my potential husbands, when Ego is a female.

### AFFINITIES.

§ 77. Any female is the potential wife of Ego, a male, whom my own wife calls her ija$^{n}$¢e (*E*), itañge (𝒢), itimi (𝒜), or itujañge (𝒥). I, a male, also call my potential wives those who the widows or wives of my elder or younger brothers.

I, a male, have any male for my brother-in-law whom my wife calls her elder or younger brother; also any male who is the brother of my wife's niece or of my brother's wife. But my wife's father's brother is my grandfather, not my brother-in-law, though his sister is my potential wife. When my brother-in-law is the husband of my father's sister or of my own sister, his sister is my grandchild, and not my potential wife. A man is my brother-in-law if he be the husband of my father's sister, since he can marry my own sister, but my aunt's husband is not my brother-in-law when he is my uncle or mother's brother (H). Any male is my brother-in-law who is my sister's husband (a). But while my sister's niece's husband is my sister's potential or real husband, he is my son-in-law, as he is my daughter's husband (d). I, a male or female, call any male my son-in-law who is the husband of my daughter (𝒞), my niece (𝒢 or 𝒥), or of my grandchild (𝒟), and his father is my son-in-law.

When I, a male or female, call my daughter-in-law's father my grandfather, her brother is my grandchild (D).

Any female is my daughter-in-law (male or female speaking) who is the wife of my son, nephew, or grandchild; and the mother of my son-in-law is so called by me. Any male affinity is my grandfather (or father-in-law) who is the father, mother's brother, or grandfather of my wife, my potential wife, or my daughter-in-law (the last being the wife of my son, nephew, or grandson). The corresponding female affinity is my grandmother (or mother-in-law).

### MARRIAGE LAWS.

§ 78. A man must marry outside of his gens. Two Crows, of the Hañga gens, married a Weji$^{n}$cte woman; his father married a ⅃e-sĭnde woman; his paternal grandfather, a Hañga man, married a Wasabe-hit'ajĭ woman; and his maternal grandfather, a ⅃e-sĭnde man, married a ⅃e-da-it'ajĭ woman. His son, Gai$^{n'}$-bajĭ, a Hañga, married an Iñke-sabĕ woman; and his daughter, a Hañga, married Qi¢á-gahíge, a ⅃a-da man. Caa$^{n'}$, a brother of Two Crows, and a Hañga, married a ⅃ada woman, a daughter of the chief Sĭn'de-xa$^{n'}$xa$^{n}$. Another brother, Mi$^{n}$xá-ta$^{n}$, also a Hañga, married a ⅄a$^{n}$ze woman.

Joseph La Flèche's mother was a Ponka Wasabe-hit'ajĭ woman; hence he belongs to that Ponka gens. His maternal grandfather, a Ponka

Wasabe-hit'ajĭ, married a Ponka Wajaje woman. Her father, a Wajaje, married a Ponka Maka$^{n}$ woman.

Two Crows, being a Hañga, cannot marry a Hañga woman, nor can he marry a ⌊e-sĭnde woman, as they are all his kindred through his mother. He cannot marry women belonging to the Wasabe-hit'ajĭ and ⌊e-da-it'ajĭ subgentes ("uxigɸasne") of the ɸatada gens, because his real grandmothers belonged to those subgentes. But he can marry women belonging to the other ɸatada subgentes, the Wajiñga-ɸatajĭ and ⌅e-'i$^{n}$, as they are not his kindred. In like manner Joseph La Flèche cannot marry a Ponka Wasabe-hit'ajĭ woman, a Ponka Wajaje woman, or a Ponka Maka$^{n}$ woman. But he can marry an Omaha Wasabe-hit'ajĭ woman, as she belongs to another tribe.

Gai$^{n}$-bajĭ cannot marry women belonging to the following gentes: Hañga (his father's gens), Weji$^{n}$cte (his mother's gens), ⌊e-sĭnde (his paternal grandmother's gens), Wasabe-hit'ajĭ, and ⌊e-da-it'ajĭ.

Gai$^{n}$-bajĭ's son cannot marry any women belonging to the following gentes: Iñke-sabĕ, Hañga, Weji$^{n}$cte, ⌊e-sĭnde, or that of the mother of his mother. Nor could he marry a Wasabe-hit'ajĭ or ⌊e-da-it'ajĭ woman, if his parents or grandparents were living, and knew the degree of kinship. But if they were dead, and he was ignorant of the fact that the women and he were related, he might marry one or more of them. The same rule holds good for the marriage of Qiɸa-gahige's son, but with the substitution of ⌊a-da for Iñke-sabĕ.

Two Crows cannot marry any Iñke-sabĕ woman belonging to the subgens of his son's wife; but he can marry one belonging to either of the remaining subgentes. So, too, he cannot marry a ⌊a-da woman belonging to the subgens of Qiɸa-gahige, his son-in-law, but he can marry any other ⌊a-da woman. As his brother Caa$^{n}$, had married a ⌊a-da woman of Sĭnde-xa$^{n}$xa$^{n}$'s subgens, Two Crows has a right to marry any ⌊a-da woman of her subgens who was her sister, father's sister, or brother's daughter. He has a similar privilege in the ⌅a$^{n}$ze gens, owing to the marriage of another brother, Mi$^{n}$xa-ta$^{n}$.

An Omaha Hañga man can marry a Kansas Hañga woman, because she belongs to another tribe. A Ponka Wasabe-hit'ajĭ man can marry an Omaha Wasabe-hit'ajĭ woman, because she belongs to a different tribe.

### WHOM A MAN OR WOMAN CANNOT MARRY.

A man cannot marry any of the women of the gens of his father, as they are his grandmothers, aunts, sisters, nieces, daughters, or grandchildren. He cannot marry any woman of the subgens of his father's mother, for the same reason; but he can marry any woman belonging to the other subgentes of his paternal grandmother's gens, as they are not his kindred. The women of the subgens of his paternal grandmother's mother are also forbidden to him; but those of the remaining subgentes of that gens can become his wives, provided they are such

as have not become his mothers-in-law, daughters, or grandchildren. (See § 7, 126, etc.)

A man cannot marry any women of his mother's gens, nor any of his maternal grandmother's subgens, nor any of the subgens of her mother, as all are his consanguinities.

A man cannot marry a woman of the subgens of the wife of his son, nephew, or grandson; nor can he marry a woman of the subgens of the husband of his daughter, niece, or granddaughter.

A man cannot marry any of his female affinities who are his iqa$^n$, because they are the real or potential wives of his fathers-in-law, or of the fathers-in-law of his sons, nephews, or grandchildren.

A man cannot marry any woman whom he calls his sister's daughter. He cannot marry any woman whom he calls his grandchild. This includes his wife's sister's daughter's daughter.

He cannot marry the daughter of any woman who is his ihañga, as such a daughter he calls his daughter.

He cannot marry his sister's husband's sister, for she is his iqucpa. He cannot marry his sister's husband's father's brother's daughter, as she is his iqucpa; nor can he marry her daughter or her brother's daughter, for the same reason. He cannot marry his sister's husband's (brother's) daughter, as she is his sister's potential daughter, and he calls her his iqija$^n$.

A woman cannot marry her son, the son of her sister, aunt, or niece; her grandson, the grandson of her sister, aunt, or niece; any man whom she calls elder or younger brother; any man whom she calls her father's or mother's brother; her iqiga$^n$ (including her consanguinities, her father-in-law, her brother's wife's brother, her brother's wife's father, her brother's son's wife's father, her brother's wife's brother's son, her father's brother's son's wife's brother, her grandfather's brother's son's wife's brother); or any man who is her iqande.

### WHOM A MAN OR WOMAN CAN MARRY.

A man can marry a woman of the gens of his grandmother, paternal or maternal, if the woman belong to another subgens. He can marry a woman of the gens of his grandmother's mother, if the latter belong to another subgens, or if he be ignorant of her kinship to himself.

He can marry a woman of another tribe, even when she belongs to a gens corresponding to his own, as she is not a real kinswoman.

He can marry any woman, not his consanguinity, if she be not among the forbidden affinities. He can marry any of his affinities who is his ihañga, being the ija$^n$ɬe, iqañge, iqimi, or iqujañge of his wife. And *vice versa*, any woman can marry a man who is the husband of her ija$^n$ɬe, iqañge, iqimi, or iqujañge. If a man has several kindred whom he calls his brothers, and his wife has several female relations who are his ihañga, the men and women can intermarry.

### IMPORTANCE OF THE SUBGENTES.

Were it not for the institution of subgentes a man would be compelled to marry outside of his tribe, as all the women would be his kindred, owing to previous intermarriages between the ten gentes. But in any gens those on the other side of the gentile "uneȼe," or fire-place, are not reckoned as full kindred, though they cannot intermarry.

### REMARRIAGE.

§ 79. A man takes the widow of his real or potential brother in order to become the stepfather (iȼadi jiñga, *little father*) of his brother's children. Should the widow marry a stranger he might hate the children, and the kindred of the deceased husband do not wish her to take the children so far away from them. Sometimes the stepfather takes the children without their mother, if she be maleficent. Sometimes the dying husband knows that his kindred are bad, so he tells his wife to marry out of his gens. When the wife is dying she may say to her brother, "Pity your brother-in-law. Let him marry my sister."

## CHAPTER V.

### DOMESTIC LIFE.

#### COURTSHIP AND MARRIAGE CUSTOMS.

§ 80. *Age of puberty and marriage.*—It is now customary for girls to be married at the age of fifteen, sixteen, or seventeen years among the Omahas, and in the Ponka tribe they generally take husbands as soon as they enter their fifteenth year. It was not so formerly; men waited till they were twenty-five or thirty, and the women till they were twenty years of age. Then, when a consort was spoken of they used to refer the matter to their friends, who discussed the characters of the parties, and advised accordingly, as they proved good (*i. e.*, industrious and good-tempered, and having good kindred) or bad. Sometimes an Omaha girl is married at the age of fourteen or fifteen; but in such a case her husband waits about a year for the consummation of the marriage. When a girl matures rapidly she is generally married when she is sixteen; but those who are slow to mature marry when they reach seventeen. (See § 97.)

Dougherty states (in *Long's Expedition to the Rocky Mountains*, vol. 1, p. 230) that "In the Omawhaw nation numbers of females are betrothed in marriage from their infancy. * * * Between the ages of nine and twelve years the young wife is occasionally an invited visitant at the lodge of her husband, in order that she may become familiarized with his company and his bed." But such is not the case among the Omahas according to La Flèche and Two Crows, who say that Dougherty referred to a Kansas custom.

§ 81. *Courtship.*—The men court the women either directly or by proxy. The women used to weigh the matter well, but now they hasten to marry any man that they can get. Sometimes the girl told her kindred and obtained their advice. Parents do not force their daughters to marry against their will. Sometimes a girl refuses to marry the man, and the parents cannot compel her to take him. All that they can do is to give her advice: "Here is a good young man. We desire you to marry him." Or they may say to the people, "We have a single daughter, and it is our wish to get her married." Then the men go to court her. Should the parents think that the suitor is not apt to make her a good husband they return his presents. Suitors may curry favor with parents and kindred of the girl by making presents to them, but parents do not sell their daughters. The presents made for such a purpose are generally given by some old man who wishes to get a very young girl whom he is doubtful of winning. When a man courts the

girl directly this is unnecessary. Then he gives what he pleases to her kindred, and sometimes they make presents to him.

When men reach the age of forty years without having courted any one the women generally dislike them, and refuse to listen to them. The only exception is when the suitor is beneficent. Such a man gets his father to call four old men, by whom he sends four horses to the lodge of the girl's father. If the latter consents and the girl be willing he consults his kindred, and sends his daughter, with four horses from his own herd, to the lodge of the suitor's father. The latter often calls a feast, to which he invites the kindred of the girl, as well as those of his son. When the girl is sent away by her parents she is placed on one of the horses, which is led by an old man. There is not always a feast, and there is no regular marriage ceremony.

A man of twenty-five or thirty will court a girl for two or three years. Sometimes the girl pretends to be unwilling to marry him, just to try his love, but at last she usually consents.

Sometimes, when a youth sees a girl whom he loves, if she be willing, he says to her, "I will stand in that place. Please go thither at night." Then after her arrival he enjoys her, and subsequently asks her of her father in marriage. But it was different with a girl who had been petulant, one who had refused to listen to the suitor at first. He might be inclined to take his revenge. After lying with her, he might say, "As you struck me and hurt me, I will not marry you. Though you think much of yourself, I despise you." Then would she be sent away without winning him for her husband; and it was customary for the man to make songs about her. In these songs the woman's name was not mentioned unless she had been a "miⁿckeda," or dissolute woman.

One day in 1872, when the writer was on the Ponka Reservation in Dakota, he noticed several young men on horseback, who were waiting for a young girl to leave the Mission house. He learned that they were her suitors, and that they intended to run a race with her after they dismounted. Whoever could catch her would marry her; but she would take care not to let the wrong one catch her. La Flèche and Two Crows maintain that this is not a regular Ponka custom, and they are sure that the girl (a widow) must have been a "miⁿckeda."

§ 82. *Marriage by elopement.*—Sometimes a man elopes with a woman. Her kindred have no cause for anger if the man takes the woman as his wife. Should a man get angry because his single daughter, sister, or niece had eloped, the other Omahas would talk about him, saying, "That man is angry on account of the elopement of his daughter!" They would ridicule him for his behavior. La Flèche knew of but one case, and that a recent one, in which a man showed anger on such an occasion. But if the woman had been taken from her husband by another man her kindred had a right to be angry. Whether the woman belongs to the same tribe or to another the man can elope with her if she consents. The Omahas cannot understand how marriage by cap-

ture could take place, as the woman would be sure to alarm her people by her cries.

§ 83. *Customs subsequent to marriage.*—Sometimes the kindred of the husband are assembled by his father, who addresses them, saying, "My son's wife misses her old home. Collect gifts, and let her take them to her kindred." Then the husband's kindred present to the wife horses, food, etc., and the husband's mother tells her daughter-in-law to take the gifts to her parents. When the husband and wife reach the lodge of the wife's parents the father calls his daughter's kindred to a feast and distributes the presents among them. By and by, perhaps a year later, the wife's kindred may assemble and tell the husband to take presents and food to his kindred, especially if the latter be poor. This custom is now obsolescent.

§ 84. *Polygamy.*—The maximum number of wives that one man can have is three, *e. g.*, the first wife, her aunt, and her sister or niece, if all be consanguinities. Sometimes the three are not kindred.[8]

When a man wishes to take a second wife he always consults his first wife, reasoning thus with her: "I wish you to have less work to do, so I think of taking your sister, your aunt, or your brother's daughter for my wife. You can then have her to aid you with your work." Should the first wife refuse the man cannot marry the other woman. Generally no objection is offered, especially if the second woman be one of the kindred of the first wife.

Sometimes the wife will make the proposition to her husband, "I wish you to marry my brother's daughter, as she and I are one flesh." Instead of "brother's daughter," she may say her sister or her aunt.

The first wife is never deposed. She always retains the right to manage household affairs, and she controls the distribution of food, etc., giving to the other wives what she thinks they should receive.

§ 85. If a man has a wife who is active and skillful at dressing hides, etc., and the other wives are lazy or unskillful, he leaves them with their parents or other kindred, and takes the former wife with him when he goes with the tribe on the buffalo hunt. Sometimes he will leave this wife awhile to visit one of his other wives. But Dougherty was misinformed when he was told that the skillful wife would be apt to show her jealousy by "knocking the dog over with a club, repulsing her own child, kicking the fire about, pulling the bed, etc." (see p. 232, Vol. I, *Long's Expedition to the Rocky Mountains*), for when a wife is jealous she scolds or strikes her husband or else she tries to hit the other woman.

*Polyandry.*—The Omahas say that this has not been practiced among them, nor do the Ponkas know this custom. But the terms of kinship seem to point to an age when it was practiced.

§ 86. *Permanence of marriage.*—Among the Santee Dakotas, where mother-right prevails (?), a wife's mother can take her from the husband

[8] The writer knew a head chief that had four wives.

and give her to another man. Among the Ꝑegiha, if the husband is kind, the mother-in-law never interferes. But when the husband is unkind the wife takes herself back, saying to him, "I have had you for my husband long enough; depart." Sometimes the father or elder brother of the woman says to the husband, "You have made her suffer; you shall not have her for a wife any longer." This they do when he has beaten her several times, or has been cruel in other ways. But sometimes the woman has married the man in spite of the warnings of her kindred, who have said to her, "He is maleficent; do not take him for your husband." When such a woman repents, and wishes to abandon her husband, her male kindred say to her, "Not so; still have him for your husband; remain with him always." Thus do they punish her for not having heeded their previous warnings. When they are satisfied with each other they always stay together; but should either one turn out bad, the other one always wishes to abandon the unworthy consort.

When parents separate, the children are sometimes taken by their mother, and sometimes by her mother or their father's mother. Should the husband be unwilling, the wife cannot take the children with her. Each consort can remarry. Sometimes one consort does not care whether the other one marries again or not; but occasionally the divorced wife or husband gets angry on hearing of the remarriage of the other.

## DOMESTIC ETIQUETTE—BASHFULNESS.

§ 87. A man does not speak to his wife's mother or grandmother; he and she are ashamed to speak to each other. But should his wife be absent he sometimes asks her mother for information, if there be no one present through whom he can inquire.

In former days it was always the rule for a man not to speak to his wife's parents or grandparents. He was obliged to converse with them through his wife or child, by addressing the latter and requesting him or her to ask the grandparent for the desired information. Then the grandparent used to tell the man's wife or child to say so and so to the man. In like manner a woman cannot speak directly to her husband's father under ordinary circumstances. They must resort to the medium of a third party, the woman's husband or child. But if the husband and child be absent, the woman or her father-in-law is obliged to make the necessary inquiry.

A woman never passes in front of her daughter's husband if she can avoid it. The son-in-law tries to avoid entering a place where there is no one but his mother-in-law. When at the Ponka mission, in Dakota, the writer noticed the Ponka chief, Standing Buffalo, one day when he entered the school-room. When he saw that his mother-in-law was

seated there, he turned around very quickly, threw his blanket over his head, and went into another part of the house.

Another custom prevails, which Dougherty described thus: "If a person enters a dwelling in which his son-in-law is seated, the latter turns his back, and avails himself of the first opportunity to leave the premises. If a person visits his wife during her residence at the lodge of her father, the latter averts himself, and conceals his head with his robe, and his hospitality is extended circuitously by means of his daughter, by whom the pipe is transferred to her husband to smoke." He also said that if the mother-in-law wished to present her son-in-law with food, it was invariably handed to the daughter for him; and if the daughter should be absent, the mother-in-law placed the food on the ground, and retired from the lodge that he might take it up and eat it." (*Long's Expedition to the Rocky Mountains*, Vol. I, pp. 253, 254.) The Dakotas have this custom and call it "wiśtenkiyapi."

## PREGNANCY.

§ 88 The woman, when she perceives that the catamenia does not recur at the expected period, begins to reckon her pregnancy from the last time that she "dwelt alone." As the months pass, she says, "Miⁿ′ gána bɸiⁿ′," *I am that number of months* (with child). If she cannot tell the exact number of months, she asks her husband or some old man to count for her. At other times, it is the husband who asks the old man. They calculate from the last time that the woman "dwelt alone."

Dougherty says that he did not hear of any case of "longing, or of nausea of the stomach, during pregnancy."

§ 89. *Couvade, Fœticide, and Infanticide.*—Couvade is not practiced among the ɸegiha. Fœticide is uncommon. About twenty-two years ago, Standing Hawk's wife became *enceinte*. He said to her, "It is bad for you to have a child. Kill it." She asked her mother for medicine. The mother made it, and gave it to her. The child was still-born. The daughter of Wackaⁿ-maⁿɸiⁿ used to be very dissolute, and whenever she was pregnant she killed the child before birth. These are exceptional cases; for they are very fond of their children, and are anxious to have them. Infanticide is not known among them.

§ 90. *Accouchement.*—The husband and his children go to another lodge, as no man must witness the birth. Only two or three old women attend to the patient. In some cases, if the patient be strong, she "takes" the child herself, but requires assistance subsequently. Should the woman continue in pain for two or three days without delivery, a doctor is sent for, and he comes with a medicine that is very bitter. He departs as soon as he has caused the patient to drink the medicine. There are about two or three Omahas who know this medicine, which is called Niaciⁿga makaⁿ, *Human-being medicine*. The writer saw one

of these roots at the Kaw Agency, Indian Territory. It is used by the Kansas. The doctor never comes of his own accord. After having given this medicine two or three times without success, he says, "I have failed, send for some one else." Then another doctor comes, and tries his medicine. Very few Omaha girls die in child-bed.

After delivery the patient is bound tightly about the abdomen, to reduce the size, as is the custom among civilized nations. Then is she washed in cool water if it be summer time, but in tepid water if it be cold weather. She must bathe twice a day. Mr. Hamilton was told that "the flow of blood ceased then to a great extent, especially after a few days; seldom lasting beyond ten days." La Flèche said that the women do not tell about the cessation of the flow. When the woman is strong she may go to work on the following day; but if she be weak she may require a fortnight or three weeks for recovering her strength.

When the husband asks about the infant, and they reply "It is a boy," or "It is a girl," he is very glad. Sometimes the husband treats a girl infant better than a boy, saying, "She cannot get anything for herself, whereas a son can take care of himself, as he is strong." Mr. Hamilton says, "I have heard of cases of severe labor. Women act as midwives, and with some skill, removing the placenta when adhering to the uterus, and in the usual manner."

Soon after birth the child is washed all over, wrapped in clothes, which are bound loosely around it. About two or three days after birth the infant's father or grandfather gives it a name, which is not always a nikie name. (See the account of the ceremony in the Iṇada gens, when a child is four days old, § 65.) Sometimes it is put into the cradle or board in two or three days; sometimes in about a week.

*Nursing.*—Another woman serves as wet-nurse till the mother's breasts are full of milk. Mammary abscess is very rare.

§ 91. *Number of children.*—In 1819–'20 Dougherty wrote thus: "Sterility, although it does occur, is not frequent, and seems to be mostly attributable to the husband, as is evinced by subsequent marriages of the squaws. The usual number of children may be stated at from four to six in a family, but in some families there are ten or twelve. Of these the mother has often two at the breast simultaneously, of which one may be three years of age. At this age, however, and sometimes rather earlier, the child is weaned by the aid of ridicule, in which the parents are assisted by visitors." In 1882 La Flèche and Two Crows declared that there are many cases of barrenness. Children are not very numerous. While some women have seven, eight, nine, or even ten children, they are exceptional cases. And when a woman gives birth to so many, they do not always reach maturity. There are women who have never borne any children, and some men have never begotten any. One woman, who is of Blackfoot origin, is the wife of James Springer, an Omaha, and she has borne him twelve children; but no other woman has had as many.

## CHILDREN.

§ 92. *Diseases of children.*—Summer complaint from teething is rare. Diarrhea, however, occurs frequently, even in children who walk, and when they are about four feet high. This may be accounted for as follows: their mothers' milk or other food disagrees with them. Dougherty found that during their first year the Omaha children suffered more from constipation than from any other complaint; and he said that this was relieved by soap suppositories. This is not the case now, according to La Flèche and Two Crows; and the writer never heard of its prevalence when he resided among the Ponkas and Omahas.

§ 93. *Adoption of children.*—The Omaha idea of adoption differs from ours. A member of the same gens, or one who is a consanguinity cannot be adopted; he or she is received by a relation. Two examples of this were told to the writer: Gahige received Wacuce's eldest son when the father died, because the former had been the potential father of the youth, who succeeded Wacuce as custodian of the sacred pipes. Now Gahige keeps the pipes himself for his son. A$^{n}$pa$^{n}$-skă, of the Weji$^{n}$cte gens, gave his son, Bi$^{n}$ze-tigṭe, to his chief, Mahi$^{n}$·ṭiñge, to be his son and servant. Mahi$^{n}$ṭiñge having received his kinsman, the latter has become the keeper of the treaty between the United States and the Omahas. This boy is about sixteen years of age.

Omaha adoption is called "ciégiṭĕ," *to take a person instead of one's own child.* This is done when the adopted person resembles the deceased child, grandchild, nephew, or niece, in one or more features. It takes place without any ceremony. An uncle by adoption has all the rights of a real uncle. For example, when Mr. La Flèche's daughter Susette wished to go to the Indian Territory to accept a situation as teacher, and had gained the consent of her parents, Two Crows interposed, being her uncle by adoption, and forbade her departure. (See §§ 118 and 126.)

§ 94. *Clothing of children.*—Children were dressed in suits like those of their parents, but they used to wear robes made of the skins of the deer, antelope, or of buffalo calves. When the boys were very small, say, till they were about four years old, they used to run about in warm weather with nothing on but a small belt of cloth around the waist, according to Dougherty; and the writer has seen such boys going about entirely naked. Girls always wear clothing, even when small. When a boy was eight years old, he began to wear in winter leggings, moccasins, and a small robe.

§ 95. *Child life.*—The girl was kept in a state of subjection to her mother, whom she was obliged to help when the latter was at work. When she was four or five years old, she was taught to go for wood, etc. When she was about eight years of age, she learned how to make up a pack, and began to carry a small pack on her back. If she was disobedient, she received a blow on the head or back from the hand of

her mother. As she grew older, she learned how to cut wood, to cultivate corn, and other branches of an Indian woman's work. When a girl was about three feet high, she used to wear her hair tied up in four rolls, one on top of her head, one at the back, and one at each side. This lasted till she was about six years old. The girl manifested the most affectionate regard for her parents and other near kindred.

With a boy there was not so much strictness observed. He had more liberty allowed him; and at an early age he was furnished with a bow and blunt arrows, with which he practiced shooting at marks, then at birds. He had his sports as well as the girl, though it was not usual for many boys and girls to play together. If a boy played with girls (probably with those who were not his sisters), the Ponkas referred to him as a "miⁿqnga" or hermaphrodite. Both sexes were fond of making houses in the mud, hence the verb, ɋígaxe, *to make lodges, to play games.*

Joseph La Flèche used to punish his son, Frank, by tying him to a chair with a cord and saying to him, "If you break the cord I will strike you."

When a boy was seven or eight years old he was expected to undergo a fast for a single day. He had to ascend a bluff and remain there, crying to Wakanda to pity him and make him a great man. Dougherty said that the boy rubbed white clay over himself, and went to the bluff at sunrise. When the boy was about sixteen years of age he had to fast for two days in succession. This had to be without any fire, as well as without food and drink; hence, it was not practiced in the winter nor in the month of March. The period of fasting was prolonged to four days when the boy was from eighteen to twenty years of age. Some youths fasted in October; some fasted in the spring, after the breaking up of the ice on the Missouri River. The same youth might fast more than once in the course of the year. Some who fasted thought that Wakanda spoke to them.

Boys took part with their elders in the Hede-watci, when they danced, stripped of all clothing except the breech-cloth.

## STANDING OF WOMEN IN SOCIETY.

§ 96. The women had an equal standing in society, though their duties differed widely from what we imagine they should be. On cold days, when the husband knew that it was difficult for the woman to pursue her usual occupations, he was accustomed to go with her to cut wood, and he used to assist her in carrying it home. But on warm days the woman used to go alone for the wood. The women used to dress the hides at home, or at the tent in which she was staying when the people were traveling. When a woman was strong she hoed the ground and planted the corn; but if she was delicate or

weak, her husband was willing to help her by hoeing with her. The woman did the work which she thought was hers to do. She always did her work of her own accord. The husband had his share of the labor, for the man was not accustomed to lead an idle life. Before the introduction of fire-arms the man had to depend on his bow and arrows for killing the buffaloes, deer, etc., and hunting was no easy task. The Indian never hunted game for sport.

## CATAMENIA.

§ 97. The sexual peculiarity was considered as "Wakan'daɿa'ɸica$^{n}$," *pertaining to Wakanda.* In the myth of the Rabbit and the Black Bears, Mactciñge, the Rabbit, threw a piece of the Black Bear chief against his grandmother, who had offended him, thereby causing her to have the catamenia. From that time women have been so affected. Among the Omahas and Ponkas the woman makes a different fire for four days, dwelling in a small lodge, apart from the rest of the household, even in cold weather. She cooks and eats alone, telling no one of her sickness, not even her husband. Grown people do not fear her, but children are caused to fear the odor which she is said to give forth. If any eat with her they become sick in the chest, very lean, and their lips become parched in a circle about two inches in diameter. Their blood grows black. Children vomit. On the fourth or fifth day, she bathes herself, and washes her dishes, etc. Then she can return to the household. Another woman who is similarly affected can stay with her in the small lodge, if she knows the circumstances. During this period, the men will neither lie nor eat with the woman; and they will not use the same dish, bowl, and spoon. For more than ten years, and since they have come in closer contact with the white people, this custom of refusing to eat from the same dish, etc., has become obsolete. Dougherty stated that in the young Omaha female, catamenia and consequent capability for child-bearing, took place about the twelfth or thirteenth year, and the capacity to bear children seemed to cease about the fortieth year. This agrees in the main with what the writer has learned about the age of puberty (§ 80) and the law of widows (§ 98). La Flèche said that the change of life in a woman occurs perhaps at forty years of age, and sometimes a little beyond that age.

## WIDOWS AND WIDOWERS.

§ 98. *Widows.*—A widow was obliged to wait from four to seven years after the death of her husband before marrying again. This was done to show the proper respect to his memory, and also to enable her

to wean her infant, if she had one by him, before she became *enceinte* by her next husband. When a woman disregarded this custom and married too soon, she was in danger of being punished by the kindred of the deceased husband. If they could catch her within a certain period, they had the right to strike her on the head with knives, and to draw the blood, but they could not inflict a fatal blow. Now, if widows are under forty years of age they can marry in two or three years after the death of the first husband; but if they are over forty years of age, they do not remarry.

§ 99. *Stepmothers.*—Some are kind, others are cruel. But in the latter event there are certain remedies—the husband may separate from his wife, or else some of the kindred of the children may take charge of them.

§ 100. *Widowers.*—Men used to wait from four to seven years before they remarried; now they do not wait over one or two years. The kindred of the deceased wife used to take a man's ponies from him if he married too soon. Sometimes they became angry, and hit him; but if he waited a reasonable time, they had nothing to say. There is a similar custom among the Otos and Pawnees. Sometimes a man loved his wife so dearly that after her death he remained a widower a long time. At last some of the kindred of the deceased woman would say to one another, "See! this man has no one to sew his moccasins; seek a wife for him (among our women)." Then this would be done, and he would be induced to marry again.

## RIGHTS OF PARENTS AND OTHERS.

§ 101. *Rights of parents and other kindred.*—Parents had no right to put their children to death; nor could they force them to marry against their will. Mothers' brothers and brothers seem to have more authority than the father or mother in matters relating to a girl's welfare. They were consulted before she was bestowed in marriage, unless she eloped with her husband. A mother could punish a disobedient daughter when the latter was a child and refused to learn to work. Kindred had the right to avenge the death of one of their number.

§ 102. *Ú¢iqĕ, or Refugees.*—They have no special rights, as such; but they share the privileges of the people with whom they dwell, and with whom they sometimes intermarry. Omahas have joined the Ponka tribe, as in the case of Ma$^{n}$tcu-sínde-¢iñge, and Ponkas have been incorporated into the Omaha tribe, as in the cases of Jabe-skă, ⅁enicka, and Mr. La Flèche himself.

§ 103. *Isínu.*—An isínu is an unmarried youth, or man who dwells in the lodge of one of his friends or kindred. He may be the kinsman of the husband or of the wife. He is also called a wama$^{n}$he.

*Wama$^{n}$'he and Áma$^{n}$he.*—The owner of a lodge, whether a man or a woman, is the ama$^{n}$he, and the isínu is the wama$^{n}$he, who has no lodge of his own, and is obliged to ask for shelter of some one who is more favored than himself. While the wama$^{n}$he has shelter he is expected to do his share of the hunting of game, etc., just as all the other male members of the household do, and he must bring it in for the benefit of his host and the household. Sometimes the ama$^{n}$he gives a skin tent to the wama$^{n}$he, who then goes elsewhere, as he has a lodge of his own.

Only those men are celibates who cannot get wives. There are no single women, as the demand is greater than the supply.

## PERSONAL HABITS, POLITENESS, ETC.

§ 104. *Personal habits.*—The Omahas generally bathe (hi¢á) every day in warm weather, early in the morning and at night. Some who wish to do so bathe also at noon. "Jackson," a member of the Elk gens, bathes every day, even in winter. He breaks a hole in the ice on the Missouri River and bathes, or else he rubs snow over his body. In winter the Omahas heat water in a kettle and wash themselves (ɣig¢íja). This occurs in some cases every week, but when a person is prevented by much work it is practiced once in two or three weeks. There are some who are not so particular about washing. One chief, Wacka$^{n}$-ma$^{n}$¢i$^{n}$, was nickamed "The man who does not wash his hands," and his wife was styled "The woman who does not comb her hair." Wacka$^{n}$-ma$^{n}$¢i$^{n}$ heard of this, and it shamed him into better habits. It was always the custom to brush and comb their hair, and the writer has a specimen, "qade-miɣahe," such as served the Omahas of a former generation for both brush and comb. The Ponkas used to bathe in the Missouri every day. The Pawnees used to neglect this custom, but of late years they have observed it. La Flèche and Two Crows prefer the sweat-bath to all other ways of cleansing the body. They say that it is not a sacred rite, though some Indians pretend that it is such; and it is so described in the myths. Cedar twigs are still dropped on the hot stones to cause a perfume.

§ 105. *Politeness.*—When friends or kindred have not met for about a month they say, on meeting, "Hau! kagéha," *Ho! younger brother*, "Hau! negíha," *Ho! mother's brother*, etc., calling each other by their respective kinship titles, if there be any, and then they shake hands. There are no other verbal salutations. Parents kiss their children, especially when they have been separated for any time, or when they are about to part. When the chief, Standing Grizzly Bear, met Peter Primeau, Ma$^{n}$tcu-hi-$^{n}$qti, and Cahie¢a at Niobrara in January, 1881, he embraced them, and seemed to be very deeply affected. La Flèche and

Two Crows did not know about this custom, which may have been borrowed by the Ponkas from the Dakotas.

When persons attend feasts they extend their hands and return thanks to the giver. So also when they receive presents. When favors are asked, as when the chiefs and brave men interpose to prevent the slaying of a murderer, each extends a hand with the palm towards the would-be avengers, or he may extend both hands, calling the people by kinship titles, with the hope of appeasing them. If a man receives a favor and does not manifest his gratitude, they exclaim, "Wajé-ɸiñge ámaⁿ!"—*He does not appreciate the gift! He has no manners!* They apply the same expression to the master of a tent who does not show any desire to be hospitable to a visitor.

A person is never addressed by name, except when there are two or more present who are of the same kinship degree. Then they must be distinguished by their names. They seldom call a person by name when speaking about him. This rule is not observed when guests are invited to feasts. The criers call them by name. When men return from war the old men, who act as criers, halloo and recount the deeds of each warrior, whom they mention by name. After a battle between the Ponkas and Dakotas, in 1873, as the former were returning to the village after the repulse of the latter, Naⁿbe-ɸiɁu, of the Wajaje gens, stopped at the house of Maⁿtcu-ɁañGa, who had distinguished himself in the fight. Naⁿbe-ɸiɁu gave a yell, and after leaping a short distance from the ground, he struck the door of the house with the blunt end of the spear, exclaiming "Maⁿtcu-ɁañGa, you are a Wajaje!" In making presents, as after returning from war, the donor can mention the name of the donee.

People never mention the names of their parents or elders, of their iɁigaⁿ, iɁaⁿ, etc. A woman cannot mention her iɁinu's name; but if her isañGa (younger brother) be small, she can call his name.

Mothers teach their children not pass in front of people, if they can avoid it. Young girls cannot speak to any man except he be a brother, father, mother's brother, or a grandfather, who is a consanguinity. Otherwise they would give rise to scandal. Girls can be more familiar with their mother's brother than with their own brothers. Even boys are more familiar with their mother's brother than with their own father, and they often play tricks on the former.

Politeness is shown by men to women. Men used to help women and children to alight from horses. When they had to ford streams, the men used to assist them, and sometimes they carried them across on their backs. Even if a man is not the woman's husband, he may offer to carry her over instead of letting her wade. One day, a young woman who was on her way to Decatur, Nebr., with her brother, wished to stop at a spring, as she was thirsty. The ground by the spring was muddy, and the woman would have soiled her clothing had she knelt. But just then Maxewaɸe rode up and jumped from his horse. He pulled up some

grass and placed it on the ground, so that the woman might drink without soiling her dress. Such occurrences have been common.

§ 106. *Hospitality.*—All who are present at meal-time receive shares of the food. Even if some who are not on friendly terms with the host happen to enter suddenly they partake. But only friends are invited to feasts. Should one arrive after all the food has been divided among the guests, the host gives part of his share to the new-comer, saying, "Take that." The new-comer never says, "Give it to me." Should a woman come the host gives her some of the uncooked food, and tells her to take it home and boil it. Sometimes the host sees several uninvited ones looking on. Then he tells his wife to boil some food for them. Or, if the wife was the first to notice their presence, she asks her husband's permission. He replies, "Yes, do it."

Here and there in the tribe are those who are stingy, and who do not show hospitality. Should an enemy appear in the lodge, and receive a mouthful of food or water, or put the pipe in his mouth, he cannot be injured by any member of the tribe, as he is bound for the time being by the ties of hospitality, and they are compelled to protect him, and send him to his home in safety. But they may kill him the next time that they meet him.

When a visitor enters a lodge to which he has not been invited (as to a feast), he passes to the right of the fire-place, and takes a seat at the back of the lodge opposite the door.

The master of the lodge may sit where he pleases; and the women have seats by the entrance. Sometimes there is an aged male kinsman staying at the lodge, and his place is on the right side of the fire-place near the entrance. (Frank La Flèche. Compare § 112, as given by his father.)

## MEALS, ETC.

§ 107. *Meals.*—When the people were traveling in search of buffaloes, they generally had but two meals a day, one in the morning before they struck the tents, and one in the evening after they pitched the tents. But if they moved the camp early in the morning, as in the summer, they had three meals—breakfast, before the camp was moved; dinner, when they camped again; and supper, when they camped for the night. During the winter, they stopped their march early in the afternoon, and ate but one meal during the day. When the camp remained stationary, they sometimes had three meals a day, if the days were long. They ate ꞑa (dried buffalo meat), ꞑanuꞑa (fresh meat), and wataⁿzi (corn), which satisfied their hunger. And they could go a long time without a meal. Soup was the only drink during meals. They drank water after meals, when they were thirsty. They washed the dishes in water, and rubbed them dry with twisted grass. The trader's story in *Long's Expedition to*

*the Rocky Mountains*, Vol. I, pp. 322, 323, if true, relates to some other tribe.

The average amount of meat at a meal for an adult was two pounds, but some ate three pounds. The maximum quantity was about four pounds.

§ 108. During the sun-dance, the Ponkas pretended to go without food or drink for three days and nights; but near the sun-pole could be found a bulbous root, which was used by the dancers for satisfying hunger and thirst. This secret was told the writer by a man, an influential chief, who had taken part in the dance in former years. This dance is of Dakota origin, and is not practiced among the Omahas.

§ 109. At the present day, the Omahas use wheat, flour, sugar, coffee, tea, bacon, and other kinds of provisions introduced by the white people. They have been familiar with wheat for the past forty years. Many subsist chiefly on corn, as they cannot afford to buy great quantities of the provisions which have been mentioned. But while they are fond of wheat bread, they cannot be induced to eat corn bread in any shape, and they never have their corn ground into meal. All try to have sugar and coffee three times a day, even if they are compelled to go without meat. Within the past twenty years they have found a substitute for tea. It is made of the leaves or roots of one of the two species of "ʇabé-hi." One kind is called "na$^{n}$'pa-ʇañ'ga ʇabé-hi," or "large cherry ʇabé-hi"; but the species of which the tea is made is the ʇabé-hi, which spreads out, resembling twigs. It grows on hills, and its large roots hinder the breaking of the prairie. The leaves, which are preferred for making the tea, resemble those of red cherry-trees, though they are smaller. When leaves cannot be obtained, they boil chips of the roots, which makes the water very red. The taste resembles that of the Chinese tea. (See § 177.)

§ 110. *Cannibalism.*—Cannibalism is not practiced among the Omahas and Ponkas, and it has been of rare occurrence among the Iowas. Mr. Hamilton says: "I have heard of an old Iowa chief who roasted and ate the ribs of an Osage killed in war; also of some one who bit the heart of a Pawnee, but this was evidently done for the purpose of winning a reputation for bravery."

§ 111. *Feasts.*—See §§ 81, 83, 106, 119, 124, 130, 143, 151, 187–8, 195–6, 217, 219, 246, 249–50, 274, and 289.

During the buffalo hunt and just before starting on it the only gens that invited guests to feasts was the Hañga. And whenever any important matters, such as the ceremonies connected with planting corn, required deliberation, it was the duty of the Hañga chief to prepare a feast and invite the chiefs and other guests. (See §§ 18, 130.) On ordinary occasions, any one can have a feast. (See § 246.) Then the principal guest sits at the back of the lodge, opposite the door, on the right of which are the seats of the wag¢a, the host's seat being on the left of the entrance. As the guests enter they pass to the left and around the circle, those coming first taking seats next the wag¢a, and

the last ones arriving finding places near the host. Two young men who take out the meat, etc., from the kettles, have no fixed places for sitting.

They give feasts to get horses and other presents, to win a reputation for generosity, and perhaps an election to the chieftainship; also for social and other purposes.

*The Mandan feast.*—The following is an account of a feast given by the Mandan dancing society: "When the food has been prepared the crier or herald calls for those to come to the feast who take part in the dance. To bad men he says, 'Do not come to the feast at which I am going to eat,' and they stay away. Should the guests be slow in coming, the last one who arrives is punished. He is compelled to eat a large quantity of food, 6, 8, or 10 pounds. The others sit waiting for him to eat all that has been placed before him, and as they wait they shake the rattles of deer-claws and beat the drum. This is not a sacred rite, but an amusement. If the man finds that he cannot eat all in his bowl, he looks around the circle and finds some one to whom he gives a blanket, shirt, gun, or a pair of leggings, with the rest of the food saying, 'Friend, help me (by eating this).' Should the second man fail to eat all, he in turn must make a present to a third man, and induce him to finish the contents of the bowl. Sometimes horses are given as presents. Should a man come without an invitation, just to look on, and enter the lodge of his own accord, he must give presents to several of the guests, and depart without joining in the feast. When one smokes, he extends the pipe to another saying, 'Smoke.' The second man smokes without taking hold of the pipe. Should he forget and take hold of it, all the rest give the scalp-yell, and then he is obliged to make a present to some one present who is not one of his kindred. Should one of the men make a mistake in singing, or should he not know how to sing correctly, as he joins the rest, they give the scalp-yell, and he is compelled to make a present to some one who is not one of his kindred. If one of the guests lets fall anything by accident, he forfeits it and cannot take it up. Any one else can appropriate it. While at this feast no one gets angry; all must keep in a good humor. None but old men or those in the prime of life belong to this society."

Sometimes the guests danced while they were eating. All wore deers' tail head-dresses, and carried rattles of deers' claws on their arms. One drum was used. There was no fixed number of singers; generally there were six. Each one danced as he stood in his place, instead of moving around the lodge. There was no special ornamentation of the face and body with paint. All wore good clothing. The Omahas danced this Mandan dance after the death of Logan Fontenelle.

Those who boil sacred food, as for the war-path, pour some of the soup outside the lodge, as an offering for the ghosts.

§112. *Sleeping customs.*—They sleep when sleepy, chiefly at night. There are no sacred rites connected with sleeping. Adults occupy that part of the lodge next to the door, having their beds on each side of it.

(See § 106.) Children have their beds at the back of the lodge, opposite the entrance. When there are many children and few adults, the former occupy most of the circle.

Each member of the household pushes the sticks of wood together ("abadaⁿ") towards the center of the fire, as the ends burn off. It is not the special work of the old women or men. Nor are the aged women expected to sit at the door and drive out the dogs. Any one may drive them from the lodge, except in cold weather, when they are allowed to remain inside.

§ 113. *Charities.*—The word for generous is "wacúce," meaning also "to be brave." This is apparently the primary meaning, as a generous man is addressed as one who does not fear poverty. He is regarded as the equal of the man who fears no enemy. Generosity cannot be exercised toward kindred, who have a natural right to our assistance. All who wish to become great men are advised by their kindred to be kind to the poor and aged, and to invite guests to feasts. When one sees a poor man or woman, he should make presents, such as goods or a horse, to the unfortunate being. Thus can he gain the good-will of Wakanda, as well as that of his own people. When the Omahas had plenty of corn, and the Ponkas or Pawnees had very little, the former used to share their abundance with the latter. And so when the Omahas were unfortunate with their crops, they went on several occasions to the Pawnees, who gave them a supply. This was customary among these and other neighboring tribes.

Presents must also be made to visitors, members of other tribes. To neglect this was regarded as a gross breach of good manners. (See § 292.)

Prior to the advent of the white man, the Omahas had a custom, which was told the writer by Frank La Flèche. When one man wished to favor another by enabling him to be generous, he gave him horses, which the latter, in turn, gave away, entitling him to have his ears pierced as a token of his generosity. The act of the first man was known as "niⱥ gíbaqɸukíɸĕ," *causing another* man *to have his ears pierced.*

§ 114. *Old age.*—Old age among the Omahas does not encounter all the difficulties related by Dougherty (*Long*, I, pp. 256, 257). Old men do not work. They sometimes go after the horses, or take them to water, but the rest of the time they sit and smoke, or relate incidents of their youthful days, and occasionally they tell myths for the amusement of those around them. Old women throw away superfluous ashes, pound corn or dried meat, mend and dry moccasins, etc. Sometimes they used to bring a bundle of sticks for the fire, but that is now done by the men in their wagons.

The Omahas and Ponkas never abandoned the infirm aged people on the prairie. They left them at home, where they could remain till the return of the hunting party. They were provided with a shelter among the trees, food, water, and fire. They watched the corn-fields, and

when their provisions gave out, they could gather the ears of corn, and procure some of the dried pumpkins and ʒa (dried meat) that had been buried in *caches* by the people. They were not left for a long time, generally for but a month or two. The Indians were afraid to abandon (waa$^{n}$'ɸa) their aged people, lest Wakanda should punish them when they were away from home. They always placed them (iɸa$^{n}$'waɸĕ) near their village, where they made their home during the winter.

They do not grow gray early, though Mr. Hamilton saw some children that were gray. But gray hairs are of such rare occurrence that an Omaha woman who has them is called "Gray Hair." When any one has white hair it is regarded as a token that he or she has violated the taboo of the gens, as when an Ictasanda or Wajaje man should touch a snake or smell its odor.

§ 115. *Preparation for a journey.*—When a man is about to start on a journey he gets his wife to prepare moccasins and food for him. Then he goes alone to a bluff, and prays to Wakanda to grant him a joyful and stout heart as well as success. (See § 195.)

## CHAPTER VI.

### VISITING CUSTOMS.

§ 116. *Medicines or fetiches taken along.*—Some of the ɸegiha used to take their respective medicines with them, saying, "Our medicines are wise; they can talk like men, and they tell us how many horses we are to receive from the people to whom we are going." For an account of the dance of discovering the enemy, as Dougherty terms it, see § 271. It is danced by visitors.

§ 117. *Mode of approaching a village.*—When people go to make a friendly visit to another tribe, they stop when they are a short distance from the village or camp of their hosts, say at about 100 or 200 yards from it. There they sit on the ground and wait for some one to come and invite them to the village. Generally, each visitor departs with his special friend, or with the messenger sent from the village by that friend. On some occasions, all the visitors have been invited to one lodge, but these have been very unusual. The Omahas, Ponkas, Dakotas, Pawnees, and other tribes act thus when they visit.

### THE CALUMET DANCE.

§ 118. *The Calumet Dance.*—The generic term is "wáwaⁿ," in ɸegiha, answering to the Ⱡoiwere "wayaⁿ'wé" (the specific of which is "ákiwaⁿ," Ⱡoiwere, akíyaⁿwe), to dance the calumet dance for any particular person. But the word makes no reference to dancing or singing. It is equivalent to "waqúbe ékiɸĕ," *to make a sacred kinship.* He who wishes to confer this degree is called "wáwaⁿ aká," the dancer of the calumet dance, which is also the title of those who assist him. He for whom the dance is made is the "áwaⁿi aká," who becomes the adopted son of the other man.

§ 119. *The preliminary feast.*—When a man contemplates adopting another man in this dance he invites all the other chiefs to a feast, and consults them. When the person has not been selected he says to them, "Wáwamaⁿ kaⁿ'bɸa. Iⁿwiⁿ'ɸixi'dai-gă"—*I wish to dance the calumet dance for some one; look ye around for me* (and see who would be the proper object). But if he has already selected the person, he says to the chiefs, "Áwamaⁿ kaⁿ'bɸa. Iⁿɸiⁿ'waⁿʒaⁿ'bai-gă"—*I wish to dance for him. See for me if he is the proper one.* Sometimes they reply, "Let him alone! He is not the right one, as he is bad;" or, "Ni'aciⁿ-ga ɸiⁿ píäjĭ hă. Jiⁿ'äjĭ. Ákiwaⁿ'jĭ-gă"—*The man is bad. He is proud. Do not dance for him.* But should the chiefs give their approval, the man sends a messenger to the one whom he intends to honor, having intrusted to him a buffalo bladder containing tobacco, which is sent as a present. When the messenger reaches the place, and delivers his message, the awaⁿi aka calls his kindred together to lay the proposi-

tion before them. Sometimes he says, "I am poor. Do not come." In that case the messenger returns home, and the dance does not take place. But if the awaⁿi aka approve, and his kindred give their consent, he sends the messenger back with a favorable reply. In some instances, when one man has asked another to dance the calumet dance for him, the other one has replied, "Why should I dance it for you? Why should I give such a privilege to a bad man?"

§ 120. At the appointed time, the dancing party, which consists of two leaders and many companions, repairs to the place of destination. Sometimes the leaders take from twenty to thirty men with them. They reach the lodge of the awaⁿi aka, and there the two niniba weawaⁿ, or calumet pipes, are placed on a forked support, which is driven into the soil in the back part of the lodge.

FIG. 20.--The Weawaⁿ, or Calumet pipe.

§ 121. *Description of the pipes, etc.*—The following is a description of the calumet pipes:

In the place of a pipe-bowl each weawaⁿ has the head and neck of a "miⁿ'xa ɖáhiⁿ-ɳú," or green-necked duck. Next to this, on the upper side of the stem, are (yellowish) feathers of the great owl, extending about six inches. Next are long wing-feathers of the war eagle, split and stuck on longitudinally in three places, as on an arrow shaft. At the end of these is some horsehair, which has been reddened. It is wrapped around the stem, tied on with sinew, and then over that is fastened some of the fur of the white rabbit, with some ends dangling about six inches. The horsehair extends fully six inches below the fur of the rabbit. This horsehair is attached in two other places, and tied in a similar manner. The three tufts are equidistant, say, six inches apart. Near the last tuft is the head of a wajiñ'ga-ɖa, woodcock (?), the nose of which is white, and the head feathers are red. The bill is turned towards the mouth-piece.[9]

The head of the duck is secured to the stem by the "ha-jíde," which used to be made of deer or antelope skin, but since the coming of

[9] Frank La Flèche said that he had seen three heads of wajiñgada on one pipe, and that the number varied from one to six. There was no part of the neck of the bird, and the lower mandible was removed. In this respect only the above figure does not represent the *Omaha* pipe.

the white men a piece of red blanket or Indian cloth has been substituted. Next to this are suspended the two "wéɻa" or eggs, which are two hiⁿqpé, or plumes of the eagle. But the Indians compare them to the egg or to the eaglet in the egg, to which the adopted child is also likened. The child is still immature; but by and by he will grow, and fly like the eagle. Next are attached a number of eagle feathers. These are secured by two cords, called the "mácaⁿ iɬáze ɬaⁿ," made of deer or antelope skin.

On one pipe the eagle feathers are white, being those of a male eagle, and the pipe-stem is dark blue. On the other, they are spotted black and white, being those of a female eagle; and the pipe-stem is dark blue.

FIG. 21—Rattles used in the Pipe dance.

§ 122. There are two gourd rattles, one for each pipe. Each gourd is about five inches in diameter. A handle is thrust through the gourd, one end of which projects about an inch beyond the top of the gourd. Blue stripes about half an inch wide encircle each gourd; and two blue stripes crossing each other at right angles extend half way around, terminating when they meet the other stripe, which divides the gourd in two parts. Around the handle is tied deer skin, antelope skin, or a piece of buffalo skin. The ɻe-néxe, or buffalo bladder, which is sent at first by the messenger, is painted with three blue stripes, as on the gourd rattles. It is tied with a small, fine piece of the skin of a deer or antelope, arranged so as to be opened very easily and with the ends dangling a little.[10]

FIG. 22—The Dakota style of tobacco-pouch used by the Omahas in the Pipe dance.

§ 123. When the pipes are rested against the forked stick, the heads of the ducks are placed next the ground. A short distance from the pipes are two sticks connected with an ear of corn, which is sacred. It must be a perfect ear; the grains must not be rough or shriveled. If grains are wanting on one row or side, the ear is rejected. All the people eat the corn, so it is regarded as a *mother*. (See § 163.)

These sticks are reddened with wase-jide-nika, or Indian red. The longer stick, which is nearer the pipes, is stuck about four inches into the ground, and projects a few inches above the ear of corn. The other stick is fastened to the opposite side of the ear of corn; the top of it is on a line with the top of the ear, and the bottom extends a short distance below the bottom of the ear, but it does not reach to the ground. The ear of corn is held between the sticks by "ɻahá-

[10] This is the regular Omaha style. The above figure shows the Dakota style. One of this kind was given to Frank La Flèche by an Omaha to whom he had given a horse.

ɬisaⁿ′," which is wrapped around them all. This fastening is made of the plaited or braided hair taken from the head of a buffalo. An eagle plume (hiⁿqpe) is fastened with sinew to the top of the smaller stick. The lower part of the ear of corn is white, and the upper part is painted green.

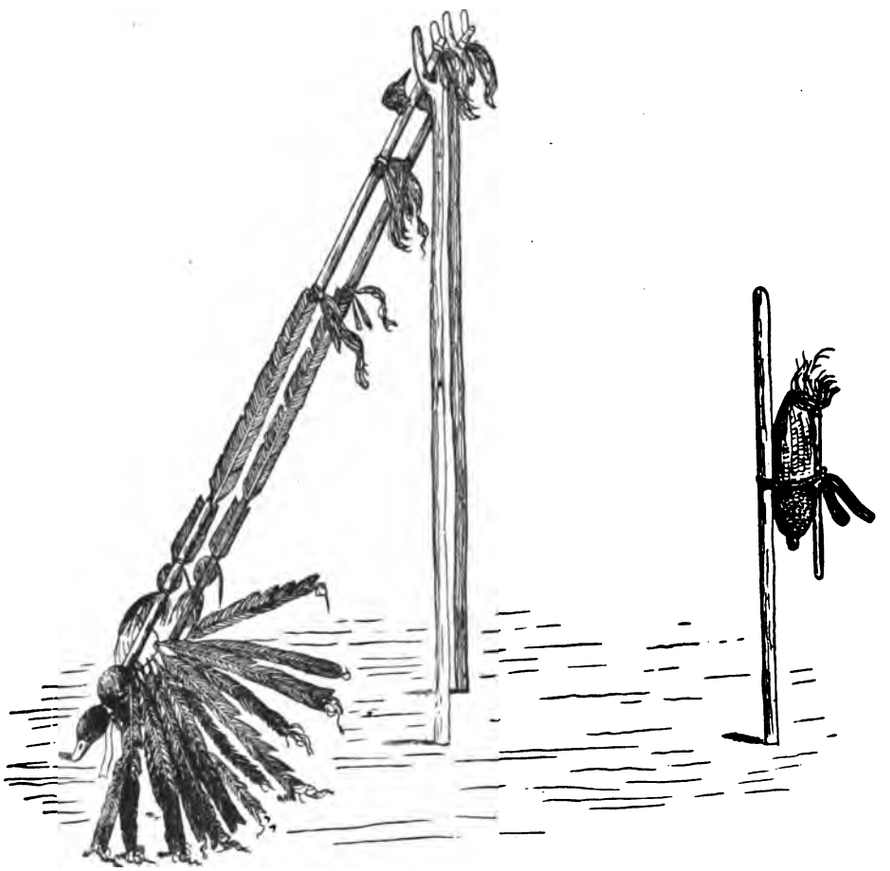


FIG. 23.—The positions of the pipes, the ear of corn, etc.

§ 124. *Feasting and singing.*—The next morning before sunrise some of the visitors sing as a signal for the people to arise and assemble. Before they sing the áwaⁿi amá say to them, "Come, O fathers, sing ye." They do not sing over an hour, perhaps not quite so long. When the men begin to sing the pipes are taken from their support, and are not returned till the singing is concluded. The singing is inside the lodge, as they sit around the fire. They sing again after breakfast, a third time in the afternoon, and once more at night. This generally continues for two days, during which time the visitors are feasted. Sometimes they continue the feasts for three days.

*Gifts bestowed.*—The day after the feasts, which is generally the third

day, the principal visitor gives presents to his host, who collects all of the people of his village or tribe. He addresses the chiefs, saying, "My father has brought these things to me." Then he gives the presents to the chiefs. The pile of gifts is often about four feet high. One or more of the chiefs then speak to the young men who accompany them, "These things are given to you. Do with them as you please. Give them to whom you desire to present them." Presently one young man arises and says, "I will give a horse to my father," meaning the principal visitor. He is followed by another, and so on, till all have spoken who have a desire to make presents. Some of the young men give many horses to the visitors. When the principal chief sees that enough horses have been given in equal numbers to each visitor he says, "Come, cease ye." Then the chiefs imitate the young men in giving presents to the visitors, taking care to give none of them a larger share than the rest. This exchange of presents consumes the entire day. The principal visitor has the right to distribute the horses among his party.

§ 125. *The dance.*—The next day two of the servants of the principal visitor are selected to do the dancing. They must be men who are "ckaⁿ' ɸipí," *i. e.*, skillful in imitating the movements and acts of the war eagle, its flying, etc. When it is windy a screen is set up, but when it is calm there is none. Before the dance is begun the man for whom the ceremony is made leads his son or daughter to his visitors, saying, "ɸé áɸawaⁿ' te hă'," *Please dance for this one.* But the parent does not bring the child by himself; one of the dancers always goes for the child, and must carry it on his back to the lodge where the dancers are staying. When one of the men came to the house of Mr. La Flèche for his daughter Susette, she was very small and so was afraid of the man, and refused to go with him. So her mother's mother carried her part

FIG. 24.—Decoration of the child's face.

of the way, and then the man took her to the lodge. After the father has addressed the visitors the child is caused to sit with the members of the dancing party. Its face is painted red, and over that is painted in blue, the hañga ɻi'aⁿze, and a stripe down the nose.[11] An eagle plume

11.—The hañge ɻi'aⁿze for the child in the calumet dance differs somewhat from that used by the chiefs and other adults. In the former the stripes next the mouth are wanting, and, instead, is painted the stripe down the nose.

or hi$^{n}$qpe is placed in its hair. The child receives clothing from the principal visitor, if he has it; but if has none, another member of the party gives the clothing. Then the adopting father says to the child, "We give you a sacred thing. Do not have a bad heart. We make you sacred, we set you apart. We have received this custom from Wakanda. We give you a sign, and henceforth no one can say that you are poor."

The child so adopted is called "Hañ'ga ɬiñké" during the dance. Compare the "hŭñ'ka (huŋka)" of the Dakotas.

There is no regular order of sitting. The drummer and singers sit in the middle, and the child is with them. Near them are the two dancers, who wear no clothing but breech-cloths. Both have the hañga ɣi'a$^{n}$ze painted in red on their faces. Each one holds a gourd rattle in his right hand. It contains hard seed, beads, or fine gravel. In their left hands are the calumet pipes. They dance for about an hour, imitating the actions of the war eagle, preserving at the same time a constant waving motion with the calumet, and agitating the gourds more or less vehemently, agreeably to the music.

The villagers look on, some standing, others sitting. At the close of the dance, the crier says to the people, "Come quickly with the presents which you have promised. They will go soon." Then the people bring the horses and other presents, which they bestow upon the visitors, who lose no time in departing for home. Then the child's face is cleansed of the paint, and the two calumets are given to the family to which the child belongs. The visitors generally depart before noon, say, about 10 o'clock. Sometimes they finish the ceremony in three days, in which case one day is spent in feasting, one in making presents, and part of the third day in the dance. Sometimes they spend three days in feasting, the fourth in making presents, and part of the fifth in dancing. But the usual order is two days in feasting, one in making presents, and part of the fourth in dancing.

§ 126. *Adoption and privileges of the child.*—This child is ever after treated as the first-born, taking the place of the real first-born, who calls him "ji$^{n}$ɬéha," *elder brother*. The wáwa$^{n}$ aká shares his property with this adopted son, giving him presents, and never refusing him anything that he may ask of him. In like manner, the real father of the child makes presents to the real son of the wawa$^{n}$ aka, just as if he were the child's father. This ceremony is never trifled with, though it is now obsolescent. No marriage can take place between members of these families for four years. At least, La Flèche and Two Crows never heard of any persons marrying who were related by this sort of kinship. After the first generation has passed away, the next may say, "That man's father, A, made me (C) his son. I will dance for D, the child of B, my adopted brother and son of A." Or B may say to C, "My father, A, danced for you. Do you dance for me in the person of my son, D." So the kinship used to be kept up, generation after gen-

eration, if they liked one another; but if they did not agree, it was allowed to disappear. (See Kinship, § 78.)

A child is danced for but once by the same party. Should they come again, there are no ceremonies observed but the giving of horses and goods. The children thus honored are from five to six years of age, none over ten years of age can be thus adopted.

Frank La Flèche said, "Cañge-skă danced this dance for my father, who therefore, called him 'father'; and I, too, call Cañge-skă my father. So all the Wejiⁿcte people (being my father's gens by adoption), called Cañge-skă, 'father' for four years. Then the kinship ceased. During that period it would have been unlawful for any of my family to intermarry with the gens of Cañge-skă."

The Ponkas are not fully acquainted with the calumet dance. They use but one pipe; but the Omahas always have two pipes.

## CHAPTER VII.

### INDUSTRIAL OCCUPATIONS.

§ 127. Industrial occupations among the ɸegiha may be treated of in three grand divisions: I. Those relating to the Sustenance of Life; II. Those concerning the Protection of Life; III. Those which have to do with the Regulation of Life. The first and second of these divisions are not fully differentiated.

To the first division may be assigned those industries pertaining to Food, Clothing, and Shelter. Food is obtained by hunting, trapping, fishing, and cultivation of the ground. In order to obtain it one is obliged to resort to weapons, traps, farming implements, &c.; and to prepare it for a meal, there are several processes required, as well as implements or utensils used in those processes. This gives rise to another kind of industry, the manufacture of those weapons, traps, implements, and utensils.

Among the industries pertaining to the Protection of Life are War Customs (especially defensive warfare) and the Practice of Medicine. (See Chapters IX and X.)

The following are connected with the Regulation of Life: The Government and the Law. (See Chapters XI and XII.)

The following relate to the Sustenance of Life.

### HUNTING CUSTOMS.

§ 128. *Kinds of hunting.*—There are two kinds of hunting known among the ɸegiha. One is called "abae," answering to the ⱡoiwere "kinañɤra," and the "wotihni" of the Dakotas. This refers to the hunting of the larger animals by a few men, or even by one person, the family of each hunter having been left at home or in the tribal camp. The other kind is the "ɂe une," when all the people go in a body, with their families, moving from place to place as they seek for herds of buffaloes. This latter is often called "gaqɸa$^{n'}$" by the Omahas and Ponkas, and "ɤiqra$^{n'}$" by the ⱡoiwere tribes.

§ 129. *Hunting seasons.*—The summer hunt was not undertaken till the corn and pumpkins had been planted, the weeds cut, and the beans gathered. The time for the return was when the wind blew open the "jáqcazi," the sunflowers and the flowers of other species of the "ja," which was about the first of September. It was only during the sum-

mer hunt that the tribe camped in the tribal circle on the open prairie. The fall or winter hunt gave a name to the season when it began "t'a$^{n}$-gaq¢a$^{n}$," the *hunting fall*, or *later fall*, as distinguished from "t'a$^{n}$" the *harvest* or *earlier fall*. This later fall corresponded with the latter part of October. Then some of the men took their families with them, and went in pursuit of deer, or occupied themselves with trapping beaver and otter. But most of the people went on the fall hunt when they sought the "mé-ha," literally, "spring hides," that is, those which had thick hair. They did not camp in the tribal circle, as it was too cold to pitch their tents on the open prairie; but each head of a family had his tent pitched in a sheltered spot; and for this purpose the hunters did not always go in one large party, but scattered in several directions, camping wherever they could find heavy timber or brush that could protect their lodges during heavy winds. They returned home in the spring about the month of April.

§ 130. *Preliminary feast held before the departure for the summer hunt.*— The principal chief or head man of the Hañga gens prepared a feast, to which he invited all the chiefs and brave men. An Iñke-sabĕ man was sent as iekiȼĕ (crier, herald) or wagȼa (messenger) around the village, and he called to each guest to bring his bowl and spoon. When the guests had assembled at the lodge of the Hañga chief the two principal chiefs sat at the back of the lodge, opposite the entrance, and on each side of them were ranged the subordinate chiefs around the circle, according to their rank. After them were seated the braves, as far as the entrance, on the left side of which sat the giver of the feast, while on the right side were the wagȼa (Waka$^{n}$-ma$^{n}$ȼi$^{n}$ and ⊥eha$^{n}$-ma$^{n}$ȼi$^{n}$, the keepers of the sacred tents of the Hañga), who were expected to attend to the fire and the kettles. The sacred pipes were lighted, according to the prescribed rules, and passed around the circle. (See §§ 18 and 111.)

The object of the council was explained by one of the head chiefs saying, "Come! consider the question. Let us remove. In how many days shall we remove?" The question was then discussed by others, and having agreed among themselves what course to pursue, one said, "Úqĕ ctĭ gȼíta$^{n}$i ꞁĭ, wata$^{n'}$ zi-hi ctĭ gȼíta$^{n}$i ꞁĭ, dúba ja$^{n'}$ ꞁí, a$^{n}$wa$^{n'}$ha$^{n}$ taí"— *When they have prepared their caches and have worked* (*i. e.*, examined) *their cornstalks, let us remove after an interval of four days.* When the chiefs perceived what was the sense of the council they decided on the route. When the food was sufficiently cooked the wagȼa removed the kettles from the fire. Then one of the head chiefs called a young man by name, saying, "Úha$^{n}$ cétĕ we'ȼitañ'-gă," *Handle that kettle for us.* Then the young man holding a spoon in his right hand dipped it into one of the kettles, took out a piece of a choice part of the meat. His left hand being elevated, with extended palm, he presented the meat in the spoon to each of the four winds, beginning at the entrance of the lodge, and he finished the ceremony by casting the meat into the fire.

Then the food was served out to the guests, the best portions of it being placed before the chiefs. Each person who received a portion thanked the host, using the appropriate kinship term, as, "Hau! jiⁿ¢éha!" *Thanks! elder brother!*—"Hau! kagé!" *Thanks! younger brother!*—"Hau! negíha!" *Thanks! mother's brother!* The old men present thanked the host, chiefs, and young men. Food is precious to them, so they talked a long time about it. The young men left some of the food in the kettles for the criers and old men, who then ate out of the kettles instead of bowls. The feast ended, smoking succeeded, after which the guests rose in succession, thanked the host, and passed out of the lodge in an orderly manner, beginning with those on the left of the entrance and fireplace. These passed in single file before the head chiefs, and round the rest of the circle of the guests, till they reached the entrance when they passed out. Then those on the right of the fireplace made a complete circuit of the lodge, passed before the head chiefs and went out of the lodge. In each case the guest followed the course of the sun as he appears to revolve around the earth. The criers sang through the village in praise of the host, whom they thanked for his hospitality. They also thanked the chiefs and young men who were present at the feast; and they proclaimed to the people the decision of the council.

§ 131. *Preparations for the departure.*—The women buried in *caches* whatever they wished to leave. Food, etc., was placed in a blanket, which was gathered up at the corners and tied with a thong; then the bundle was allowed to fall to the bottom of the *cache.* Many of such bundles were put into a single *cache.* Then the women went over the corn-fields to see that all the work had been finished. They prepared their pack-saddles and litters, and mended moccasins and other clothing. The young men spent part of the time in dancing in honor of the "watcígaxe ɋi unéɋĕ aká," the men at whose lodges the dancing societies met.

§ 132. *The departure.*—The day for their departure having arrived, the women loaded their horses and dogs, and took as great weights on their own backs as they could conveniently transport. Such lodges as were left unoccupied by aged or infirm people were secured by closing the entrances with large quantities of brushwood. Those men who were the owners of many horses were able to mount their families on horseback, but the most of the people were obliged to go afoot. Before starting the place for passing the night was determined and an Iñke-sabĕ man was sent through the village as crier saying, "Majaⁿ' gá¢uadi ¢aɋí te,ai,a¢a+!"—*They say, indeed, that you shall pitch the tents in that land which is out of sight!* He described the location of the place as he made this proclamation, so that the abaé-ma (hunters or scouts) might know where they were expected to rejoin the people. This precaution was taken each succeeding night, or else on the morrow before the departure of the hunters.

§ 133. *The Huɕuga or Tribal Circle.*—(See §§ 9–12). They generally selected some place near a stream, and they tried to find a level spot large enough to allow the formation of a single huɕuga, but when so large a level could not be had, the Omahas pitched their lodges in two concentric circles, and the Ponkas in three circles of that arrangement. The exact order of the encampment of the gentes in these concentric circles has not been preserved. As soon as the tents were erected each woman put up her wáma$^{n}$cíha, of which there were two or three for each tent. They were used for drying the ʒanuɣa or fresh meat, and each was made by sticking into the ground two forked sticks that were about four feet high, about six or eight feet apart, and placing a pole across them. The pieces of meat were hung across the transverse pole of each wama$^{n}$ciha.

After the setting up of the tent of one of the keepers of the waɕíxabe or sacred bags, a stick was thrust in the ground outside the tent, and the waɕixabe was hung on it, provided there was no rain. But should a rain ensue after the bag was hung outside, or if it was raining at the time the tent was pitched, the stick was set up without delay within the tent, and the bag was hung on it.

§ 134. *The* Waɕa$^{n}$ *or directors of the hunt.*—The chiefs always appointed four men to act as directors of the hunt. He who wished to be the principal director had to provide a pipe and a standard called the "wacábe." The former had a bowl of red pipe-stone, but was not one of the sacred pipes. The latter consisted of an oak or hickory stick about eight feet long, and reddened, to which was fastened a row of eagle feathers, some of which were white and others spotted. Their use will be explained hereafter. A "nikide" (see § 151) was fastened to the top of the stick. The chiefs said to the directors, "It is good to do such and such things." The directors considered whether it would be right or not, and finally decided what course should be pursued. Then, if any accident occurred, or quarrels between men or women, dog fights, high winds, rain, etc., ensued, the director who had advised going in that direction was blamed, and his advice was disregarded from that time, so he had to resign, and let some one else take his place. During the last summer hunt of the Omahas the directors were Ictáɕabi, Nugá, and Duba-ma$^{n}$ɕi$^{n}$, of the Iñke-sabĕ gens, and a fourth man, whose name has been forgotten. Ictaɕabi succeeded his father as the principal director.[12]

§ 135. When the people stopped and camped for only a single night,

[12] These directors were not necessarily Iñke-sabĕ men. The wacabe and pipe were always abandoned when the people were about to return home. The order of ceremonies varied. Sometimes the sacred pole was anointed after the first herd of buffaloes had been surrounded. In that case the abandonment of the wacabe and pipe was postponed awhile. Sometimes they were abandoned before the pole was anointed; and sometimes they were retained till the end of the Hede-watci. They were abandoned during the day. The pipe was fastened across the middle of the wacabe, which was stuck into the ground on a hill.

the act was called "uʒi;" but when they stopped at a place for two or more days, the act was known as "epaze." This latter happened when the horses were tired or the weather was bad. "Uʒí dúba sátăⁿ daⁿ'-ctĕaⁿ' ɥĭ, épazai"—*When they had camped but one night at each place for four or five nights, they stopped to rest for two or more days.*

§ 136. *Appointment of the scouts.*—It was generally two or three weeks after the departure from the village that they reached the country where the buffalo abounded. Meanwhile, the people were frequently in need of food, so it was customary for some of the men to leave the camp each morning to seek game of any kind for the sustenance of the tribe till the buffalo herds were surrounded. This service, too, was sometimes called "abae," and, also, "wadaⁿ'be ¢é," *to go to see* or *scout;* and the men were "ábaé-ma" or "wadaⁿ'be-ma." Before their departure they were summoned to the Wacabe tent by Tcáhĭc, the aged Iñke-sabĕ crier, who stood by that tent, and called for each man in a loud voice. The man himself was not named, but the name called was that of his small son. Thus, when Two Crows was summoned, Tcahĭc said, "Gaiⁿ-bajĭ hau+!" as the latter was then the young son of Two Crows, and the father knew that he was summoned. When the fathers had assembled at the Wacabe tent, each one was thus addressed by the principal director: "You shall go as a scout. No matter what thing you see, you shall report it just as it is. If you do not tell the truth may you be struck by lightning! May snakes bite you! May men slay you! May your feet hurt you! May your horse throw you!" When the sons are large enough they go themselves as scouts when called by name.

These scouts or hunters were expected to bring to the camp what game they killed, and to reconnoiter the surrounding country for buffalo and enemies. They used to traverse a vast extent of country, and to shoot at all animals except the buffalo. Whenever those who went the farthest came in sight of the buffalo, or discovered signs of their proximity, they dared not shoot at the animals, but they were bound to return at once to the tribe to report the fact. When they got in sight of the camp, or of the tribe in motion, they made signs with their blankets or robes. (See First Annual Report of the Bureau of Ethnology. Sign Language, p. 532.)

§ 137. *Return of the scouts when the tents are pitched.*—If the tents were pitched when the scouts came in sight, the latter went at once to the Wacabe tent, where the ʒe-saⁿ-ha is kept. As soon as each director heard or learnt of the coming of the scouts, he proceeded to the Wacabe tent. When all four had arrived the scouts made a report. They never told any news on such occasion till they reached the sacred tent; and when they reported, they did not say, "We saw buffalo." They had to say, if they discovered a herd, "Úciáɥi¢é-degaⁿ, ʒé-i eb¢égaⁿ"—*I may have deceived myself, but I think that they were buffaloes.* The words

are pronounced very deliberately. "How many were there?" said the directors. The reply might be, "I think about forty."

They were afraid of telling a falsehood to the directors and the keeper of the sacred tent. Big Elk said that when they reported they used to give a good robe to the pole in the other sacred tent, but this is denied by La Flèche and Two Crows.

After hearing the report the directors sent the crier for the chiefs, who assembled at the Wacabe tent. He also proclaimed that all the young men should go thither; so they went, and stood outside. The Hañga man (the keeper of the sacred tent?) told the young men, "In such a direction there are so many buffaloes." Then the men left the women in the camp, mounted their horses, and hastened towards the herd.

§ 138. *Return of the scouts when the people are moving.*—If the people were moving along when the scouts came in sight, the four directors proceeded in advance to meet the scouts, and the Iñke-sabĕ crier accompanied them. He marched behind the directors till they met the scouts, when he advanced to the front, and received the report from one of the scouts, who spoke in a whisper. Then the crier whispered the news to the principal director, who stood on his left, and he whispered it to the next director, and so on. After the crier told the first director, the former stepped backward several paces to the rear of the four directors, and lay down with his head pointing in the direction whence the scouts came. After all of the directors heard the news, they smoked once, and then sent the crier to proclaim the news. The scouts proceeded to their families after delivering their report to the directors. The crier proclaimed thus: "ȼázige te, ai aȼa+!" That is, "They say indeed that you shall halt!" The tents were pitched immediately, as the people knew that a herd of buffaloes had been found. Then the men hastened toward the herd, each one being mounted.

§ 139. Some of the men used to address their horses thus: "Ho, my child! do your best. I shall do my best." This was not said by all. Some gave medicine to their horses to make them swift. (See the ɖaȼiⁿ-wasabe dance, Chapter X.)

§ 140. *Council and appointment of policemen.*—As soon as they could see the herd they stopped. Then the crier called certain young men by name, saying, "Let us consecrate some ɻa or sides of buffalo meat. You will take a ɻa for me." (See § 151.) A council was held by the chiefs and directors, and having decided to surround the herd, policemen were appointed. These wanace were selected from the wahehajĭ or brave men. They had no work to do till they were near the herd. Then they had to watch the people to keep them from scaring off the herd by moving before the proper time. All who disobeyed them were severely punished. Cádaȼíce, an aged Omaha, who is now lame and palsied in one limb, was once strong and highly esteemed by his people; but he violated the rules of the hunt, and all the policemen flogged him

so unmercifully that he never fully recovered from the effects of his punishment. The offense was committed when the people had been unsuccessful in finding a herd, and were almost starved. Suddenly some buffaloes were discovered. Though it was against the law for any small number of men to go against the herd, independently of the rest, two or three, including Cadaţice, disobeyed, and, rushing forward, scared off the herd, so that none were caught. On another hunt, when the men were behind a bank, seven of them wished to ascend the hill sooner than Two Crows directed. They started up against his wishes; but he rushed after them and lashed them right and left with his whip, compelling them to desist.

During the council the chiefs said, "Let us consecrate some buffalo tongues, and also two or four hearts." Then, calling on two of the young men, they said, "Young men, you will get the hearts and tongues for us, and place them together at the sacred tent."

§ 141. *Order of approaching and surrounding a herd.*—The attacking party was always led by two men carrying the sacred objects belonging to the principal director; one man carried the pipe, and the other bore the wacabe standard. They marched abreast, and behind them came the two young men who had been chosen to collect the hearts and tongues. The latter wore no clothing but their breech-cloths, and they carried only their bows and knives. Behind them came the hunters, not going abreast or in any fixed order, but somewhat scattered. When the two leaders reached the proper distance from the herd they separated, one going to the right and the other to the left, each one proceeding in a course nearly the shape of a semi-circle, and followed by half of the men. They began to form their lines for surrounding the herd, and the leaders ran on till they had met in the rear of the herd, and then passed one another, going a short distance around on the opposite side. Then the attack began. The bearers of the pipe and standard were called "'A$^{n}$'sagi-ma," *the swift ones.*

§ 142. *Collection of the hearts and tongues.*—After they separated in front of the herd the two young men behind them did not follow them, but kept straight ahead towards the front of the herd, where they stopped. They were obliged to be constantly on the alert in order to avoid the onset of any buffalo that might rush towards them. As soon as they saw that an animal was down they rushed towards it and proceeded to cut out the heart and tongue. Then they passed to the next one that was slain, and so on. Each one cut out eight or ten tongues, but he was obliged to cut a hole in the throat before taking out the tongue, which was drawn through that hole. This was the last time that the tongues could touch any tool or metal, except when they were boiling in the kettles at the sacred tent. As fast as the men removed the hearts and tongues they cut holes in them, through which was thrust one end of a bow. When all were strung on the bows they were secured by tying pieces of green hide to the ends of each bow. The bow

and its burden was placed on the back of the owner while the green hide or bow-string went across the chest. Then the young men ran quickly in advance of the hunters and gave the hearts and tongues to the keeper of the Wacabe tent.

§ 143. *The feast on the hearts and tongues.*—In the evening, when all the policemen and other hunters had returned to the camp, the two keepers of the Hañga sacred tents boiled the hearts and tongues. As soon as they were done an Iñke-sabĕ man was sent as crier to invite the chiefs, who proceeded to the Wacabe tent. On some of these occasions all of the chiefs and Hañga men did not attend, so, when there were many tongues, and few chiefs were present, some of the brave young men were invited to assist in consuming the sacred food. None of the Wacabe Hañga could eat the sacred tongues, though any of the other Hañga who were present might do so. None of the meat was then cut with a knife. Each guest was obliged to eat his portion there, as he could not take it to his own lodge. He must put one corner of his robe (the wai$^{n}$hahage or lower part) on the ground, and having placed the piece of meat on that, he had to raise the improvised dish to his mouth and bite off a mouthful at a time. Even when the blanket was a new one that would be soiled the wearer could not avoid using it thus. This ceremony was observed four times during the summer hunt. After the surrounding of the fourth herd there were no further prohibitions of the use of a knife or bowl during that season.

When the people divide and go in two parties during the summer hunting season, only those who have the sacred tents observe the ceremonies which have just been described. The others did not consecrate any hearts and tongues.

While the guests were eating certain sacred songs were sung. According to La Flèche and Two Crows, the singers were two of the Wacabe Hañga and the ɸatada man who acted as quɻa; but Frank La Flèche says that the singers were the Hañga guests who ate the tongues.

The Iñke-sabĕ crier sat by the door, looking wistfully towards the food, and hoping almost against hope for some to be left for him.

These songs were very many, and lasted till daylight, according to A$^{n}$'ba-hébe, the tribal historian. From him the writer gained an incomplete description of them. First were the corn songs: 1. "I clear the land." 2. "I put in corn." 3. "The corn comes up." 4. "Ukít'ĕ t'a$^{n}$, *It has blades.*" 5. Qɕá éɕa$^{n}$be, *The ears appear.*" 6. "Wahába najíha t'a$^{n}$, *The ears have hair, i. e.*, silk." 7. Êgiɕe a$^{n}$'ɕispa$^{n}$, *At length we try the ears, squeezing them with the fingers, to see if they are ripe.*" 8. "Êgiɕe jút'a$^{n}$ ɻĺ, *At length it is ripe.*" 9. "Êgiɕe wahába a$^{n}$'ɕija, *At length we pull off the ears from the stalks.*" 10. "Êgiɕe wahába a$^{n}$'ɕiga, *At length we husk the ears.*" 11. "Êgiɕe wahába a$^{n}$'ɕicpi, *At length we shell the corn.*" 12. "Êgiɕe wahába a$^{n}$'ɕate, *At length we eat the corn.*"

Then followed the buffalo songs in similar order, of which were

the following: "Sígȼe wadaⁿ′be, *The tracks are seen.*" "Ⱡé wadaⁿ′be agȼí, *They have come back from seeing the buffalo.*" "Ⱦahé ǫáḏ'ŏ aȼai′, *They have gone to the hill that is near by.*" * * * "Ⱡe wiⁿ aú hă, *I have wounded a buffalo.*" "Húqpaqpa maⁿȼiⁿ′, *He walks coughing repeatedly.*" This last refers to a habit of wounded buffaloes, they cough repeatedly as the blood pours forth.

La Flèche and Two Crows say that they never attended these feasts, so they cannot give the words of the songs. Frank La Flèche says, "None besides the Hañgas and chiefs can give you correctly all of the songs of the corn and buffalo, as it is looked upon as sacrilege to sing these songs. The young people are strictly forbidden to sing them. None of the young Omahas have taken any pains to learn them, although we have often been to listen to the singing of them while the Hañgas and the chiefs were performing the ceremonies of the pole. You may, but I very much doubt it, get it all from one of the Hañgas or chiefs by liberally compensating him for his patience (of which I fear he wouldn't have enough) in going through with it, as it takes three or four nights without stopping, lasting from sundown till sunrise; and even then they find, sometimes, that they have omitted some.[13] I myself would like to know it all, but I have never once heard it sung by any of the young men with whom I am accustomed to go, although they frequently have had the presumption to sing all other religious songs, such as the Iⁿ′-kugȼi aȼiⁿ′, Wacícka aȼiⁿ′, Wasé aȼiⁿ′, etc., for amusement."

§ 144. *Skill in archery.*—So great is the skill of the Indians in archery, that they frequently sent their arrows completely through the bodies of the animals at which they shot, the arrow-heads appearing in such cases on the opposite side. Dougherty heard that in some instances the arrows were sent with such force that they not only passed entirely through the bodies of the buffaloes, but even went flying through the air or fell to the ground beyond the animals.

§ 145. *Sets of arrows.*—As each man had his own set of arrows distinguished from those of other men by peculiar marks, he had no difficulty in recovering them after the slaughter of the herd, and by means of them he could tell which animals were killed by him. Hence quarrels respecting the right of property in game seldom occurred, and the carcass was awarded to the more fortunate person whose arrow pierced the most vital part.

§ 146. Frank La Flèche killed his first buffalo when he was but seventeen years of age. On such occasions the slayer cut open the body and ate the liver with the gall over it.

§ 147. *Carving and division of a buffalo.*—When plenty of buffalo had

[13] The Osages have an account of the orgin of corn, etc., in one of their sacred songs preserved in their secret society. They do not allow their young men to learn these songs. The writer has an abstract of this account obtained from one of the Osage chiefs. It takes four days or nights to tell or chant the tradition of any Osage gens.

been killed, the slayer of one took but one man to aid him in cutting it up, and each man took half of the body as his share. All agree in saying that the hide was kept by the slayer, and some say that the choice pieces were also his. Sometimes the slayer gave pieces of the meat to those of his kindred who had no horses. All recognize the right of the slayer to give the pieces as he saw best. He was generally assisted in the cutting up by four or five men, and the body was divided into six portions, as follows: The ʇe-mañ'ge or chest, one share; the ʇe-na$^{n}$'qa or hump, one share; the ʇe-ju' or front portions of the body, two shares, with each of which was put a foreleg; the ʇe-jéga or thighs, the hinder portions of the body, two shares; with one was put the ʇe-níxa or paunch, with the other, the ʇe-cíbe or entrails. The men who assisted were not necessarily of the same gens or tribe. Sometimes the slayer took only the hide for his part and gave all the rest away. According to Frank La Flèche, "the first man who reached a slain buffalo had for his share, if the animal was fat, one of the ʇe-ju and the ʇe-nixa; but if it was lean, he took one of the ʇe-jega and the ʇe-nixa. The second man that reached there received the other ʇe-ju, and the third had the ʇe-mañge. The fourth one's share consisted of the ʇa$^{n}$'he or ʇe-cibe and the other ʇe-jega. But if the slayer of the animal wished any of these parts he could keep them. The ʇe-dí or liver was good for nothing."

Should only one buffalo be killed by a large party, say, thirty or more, the slayer always cut up the body in many pieces of equal size and divided among all the hunters. Sometimes two or three men came and helped the slayer to carve the body. Then he gave each a share. If a chief who had not been invited to sit down came and assisted in the carving, he too would get a share; but he had no right to demand a part, much less the whole body, for himself, as some writers assert. When a chief approached a carcass the slayer, if he chose, could tell him to sit down. Then the slayer, after cutting up the body, might give a piece to the chief, saying, "Take that and carry it on your back." Then the chief would thank the donor. If the chief could not tell in public of the kindness of his benefactor, the slayer would not give him a piece of the meat. When a man killed a buffalo, elk, deer, beaver, or otter, he might carry it to a chief, and say, "Wi'daha$^{n}$, *I give it to you.*"

§ 148. The women never aided in the carving. Sometimes, when a man had no boy to take care of his extra horse, he let his wife ride it, and allowed her to take out the entrails, etc., after he had slit the belly. But if the slayer offered any objection the woman could not do that. As a rule the men took out "úgaqeꞇa tĕ," or all the intestines, including the paunch, ʇe-cibe, etc., and put them aside for the women to uncoil and straighten.

§ 149. *Kinds of buffaloes eaten.*—During the winter hunt young buffalo bulls were eaten, as they were fat, but the full-grown bulls were never eaten, as their flesh was too hard. So in summer the young bulls were not eaten for the same reason. Buffalo cows were always in

good condition for eating, and so were the "ʇe-miⁿquga" or hermaphrodite buffaloes. The lattter had very long horns.

While the Ponkas and Dakotas, when pressed by hunger, might eat the kidneys raw, the Omahas always boiled them before eating.

§ 150. *Disposition of the various parts of the buffalo.*—With the exceptions of the feet and head, all the edible parts of the animal were carried to the camp and preserved. The brains (wéɸiqɸi) were taken from the skull for the purpose of dressing (ɸiqɸí) the skin or converting it into leather. These skins, which were obtained during this season, were called "ʇa'ha," and were used in the construction of the skin lodges, as well as for their individual clothing during the warm weather. When but few animals were killed even the feet were taken to the camp, and when they were boiled till they came apart they were eaten.

According to Dougherty "three women sufficed for carrying all the pieces of a buffalo, except the skin, to the camp if it was at any moderate distance, and it was their duty to prepare the meat, etc., for keeping." But Frank La Flèche says that the women seldom went out to bring in the packs of meat. Men and boys usually carried them. A woman who had any male kindred used to ask some of the younger ones to take her husband's horses and go for the meat.

All the meat could be cut into thin slices, placed on low scaffolds, and dried in the sun or over a slow fire. Some, who did not know how to cut good slices, used to cut the ʇe-mañge into strips about two inches wide, called "wásnege." But those who knew how would cut them in three, long slices (wága) for drying. "The bones of the thighs, to which a small quantity of meat was left adhering, were placed before the fire till the meat was sufficiently roasted, when they were broken. The meat and the marrow were considered a most delicious repast. These, with the tongue and hump, were considered the best parts of the animals. The meat, in its dried state, was closely compressed into quadrangular packages, each of the proper size to attach conveniently to one side of the pack-saddle of a horse. The dried intestines were interwoven together into the form of mats and tied up in packages of similar form and size." Then the women put these supplies in *caches*, and the tribe continued onward in the pursuit of other herds. (For a fuller account of the uses of the different parts of the buffalo meat see Chapter VIII, § 164.)

§ 151. *Ceremonies of thanksgiving prior to the return home. Anointing the sacred pole.*—It will be noticed that on the way to the hunt, and until the time for the greasing or anointing of the sacred pole, the Wacabe tent is the more important one. But after that a change occurred. The keeper of the other sacred tent, in which is the sacred pole, became the master of ceremonies, and the keeper of the Wacabe tent acted as his assistant. When the people had killed a great many buffaloes they were willing to return to their home. But before they could start they must take part in a religious ceremony, of which a partial description

follows. The keeper of the pole sent a crier to summon the chiefs, who assembled and decided to perform the sacred rites. For this purpose a "ʇa" was boiled at the sacred tents. About a hundred young men were collected there. They who had not yet distinguished themselves in battle went stripped to the waist, and sat in a circle around the tents. Here and there were some of the braves who wore robes, and some had on good shirts. They departed when they had eaten the food. As they followed the line of the tents several women went after them. Two of these women were they who carried the sacred tents, and with them were three or five others. As the braves proceeded they snatched from each "ʇi-ú¢igije" or "ʇí-u¢ipu" (high or low tent) a tent-pole or else a forked stick (ísag¢e) such as were used for hanging the kettles. No one offered any resistance, as they knew the purpose for which the sticks were taken. These tent-poles and isag¢e were handed to the women, who carried them to the keepers of the sacred tents. When they arrived there they used the sticks for making a long tent; and they placed the sacred pole directly in front of the tent, as in the figure. Then the crier (Tcahĭc) stood at the long tent and proclaimed as follows, by command of the keeper of the sacred pole, calling on each small child by name: "O grandchild, wherever you are standing, even though you bring but one thing, you will put it yonder on the ground for me at a short distance." Over two hundred children of parents that were prosperous were thus invited to make presents to the sacred tents. No children of poor people were expected to make any presents, but young men, boys, girls, and even infants, were expected to bring "ʇa" or their equivalents, if they could afford them. Then came the young men whom the crier had named when they first saw the buffaloes. (See § 140.) Each one brought a "ʇe-ju" or side of a buffalo. Sometimes they brought back as many as thirty, forty, or fifty. Then came the fathers with their children who had been called by name, each person bringing four presents in the name of his child. These consisted, in modern times, of a "ʇa," a gun, a fine robe, and a kettle. Each piece of "ʇa" used at this ceremony was about a yard long and half a yard wide. When a gun could not be had, "nikide," which were very precious, being used for necklaces, were offered instead. Sometimes a horse was the fourth gift. The wahehajĭ took "ʇa," and also horses or goods, as their offerings. The keeper of the pole, who could not eat the "ʇa," then called on the keeper of the Wacabe tent to act for him; and the latter then proceeded to arrange the pieces of the "ʇa" before the pole. Selecting the two pieces that were the fattest, he placed them before the pole, as the "nudaⁿ'hañga" or lords. Then he arranged the others in a row with the two, parallel with the long tent. When but few buffaloes had been killed, there was only one row of the "ʇa" before the pole; but when there had been a very successful hunt, the pieces were spread in one and a half, two, or even two and a half rows, each full row being the length of the long tent. Then the keeper of the pole sent a man of his gens to

the Iñke-sabĕ gens for the two sacred pipes. These were taken by the Hañga man to the long tent for future use. In the mean time, the principal pieces of the ɻa were cut by the keeper of the Wacabe tent in pieces as wide as one hand, and as long as from the elbow to the tips of the fingers (fully eighteen inches). These pieces of fat were mixed with red clay, and then the compound was rubbed over the sacred pole. Some say that throughout this ceremony sacred songs were sung: "Aⁿ'ba iɬáugɬĕqti waaⁿ' gɬiⁿi," *They sat singing throughout the day.* (See § 143 for what Frank La Flèche says on this point.) When the anointing was completed the remaining ɻa were collected, and divided among the Hañga people who could not eat the tongues. Sometimes the chiefs received one apiece; and the keeper of the pole asked for one, two, three, and sometimes four, which he gave to the kindred of his wife, as he could not eat that part of the buffalo.

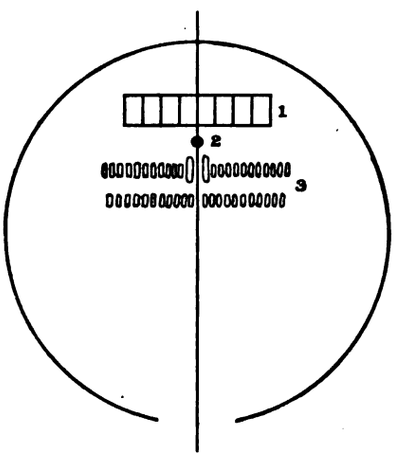



FIG. 25.—Showing positions of the long tent, the pole, and rows of "ɻa" within the tribal circle.
Legend.—1, The tent; 2, The pole; 3, The rows of ɻa.

According to some, the keeper of one of the Hañga sacred tents prayed over the sacred object which was tied upon the pole, extending the palms of his hands towards it. Then every one had to be silent and keep at a certain distance from the long tent. Inside that tent were seated twelve men in a row. (The writer suspects that ten chiefs, one from each gens, and the two keepers of the Hañga sacred tents were the occupants of the long tent. See below.) When the presents were made to the sacred pole, young girls led horses and brought blankets to the two sacred men, and were allowed to touch the sacred pole. The wife of a former trader at the Omaha Agency, when very sick, was taken in a wagon to witness the praying before the sacred pole, in hope that it might cause her recovery.

§ 152. *The sham fight.*—After the pole was anointed, the chiefs spoke of pretending to engage with enemies. So a member of the ɣaⁿze gens (in modern times Mitcáqpe-jiñga or Majaⁿ'ha-ɬiⁿ held this office) was ordered by the keeper of the pole to summon the stout-hearted young men to engage in the combat. Mitcaqpe-jiñga used to go to each brave man and tell him quietly to come to take part in the fight. According to some he proclaimed thus: "Ye young men, decorate yourselves and come to play. Come and show yourselves." Then the young men assembled. Some put on head-dresses of eagles' feathers, others wore ornaments of crow feathers (and skins of coyotes) in their belts. Some

decorated their horses. Some were armed with guns; others with bows and arrows. The former loaded their weapons with powder alone; the latter pulled their bow-strings, as if against foes, but did not shoot the arrows.

The flaps of the skins in front of the long tent were raised from the ground and kept up by means of the isaŋǥe or forked sticks. Within the long tent were seated the chiefs (ten of them?—see above) and the two keepers of the sacred tents. The chiefs had made four grass figures in the shape of men, which they set up in front of the long tent.

After the young men assembled they rode out of the circle and went back towards a hill. Then they used to send some one on foot to give the alarm. This man ran very swiftly, waving his blanket, and saying, "We are attacked!" All at once the horsemen appeared and came to the tribal circle, around which they rode once. When they reached the Weji$^{n}$cte and Ictasanda tents they dispersed, each one going wherever he pleased. Then the occupants of the long tent took the places of the horsemen, being thenceforth regarded as Dakotas. As soon as the horsemen dispersed the pursuers of the foe started out from all parts of the tribal circle, hastening towards the front of the long tent to attack the supposed Dakotas. These pursuers evidently included many of the horsemen. They shot first at the grass figures, taking close aim at them, and knocking them down each time that they fired. Having shot four times at them, they dismounted and pretended to be cutting up the bodies. This also was done four times. Next the pursuers passed between the grass figures and the place where the "ŋa" had been, in order to attack the occupants of the long tent. Four times did they fire at one another, and then the shooting ceased. Then followed the smoking of the two sacred pipes as tokens of peace. These were filled by a member of the Hañga gens and lighted by some one else. (See Sacred Pipes, § 17.) They were carried first to the chiefs in the long tent, and then over to the young men representing the pursuers. Here and there were those who smoked them. The pipes were taken around four times. Then they were consigned by the keeper of the pole to one of the men of his sub-gens, who took them back to their own tent. When he departed he wrapped around them one of the offerings made by the brave men to the sacred pole. He returned the bundle to the keeper of the pipes without saying a word.

The writer has not been able to learn whether the ŋe-sa$^{n}$-ha was ever exposed to public gaze during this ceremony or at any other time. Frank La Flèche does not know.

After the anointing of the pole (and the conclusion of the sham fight) its keeper took it back to its tent. This was probably at or after the time that the sacred pipes were returned to the Iñke-sabĕ tent.

The tent skins used for the covering of the long tent consisted of those belonging to the two sacred tents of the Hañga, and of as many others as were required.

§ 153. *The Hede-watci.*—Sometimes the ceremonies ended with the sham fight, in which event the people started homeward, especially when they were in a great hurry. But when time allowed the sham fight was followed by a dance, called the Héde-watci'. When it occurred it was not under the control of the keepers of the two sacred tents, but of the Iñke-sabe keeper of the two sacred pipes.

On the evening of the day when the sham fight took place, the chiefs generally assembled, and consulted together about having the dance. But the proposition came from the keeper of the pipes. Then the chiefs said, "It is good to dance." The dance was appointed for the following day. On the morrow five, six, or seven of the Iñke-sabĕ men, accompanied by one of their women, went in search of a suitable tree. According to La Flèche and Two Crows, when the tree was found, the woman felled it with her ax, and the men carried it on their shoulders back to the camp, marching in Indian file. Frank La Flèche says that the tree was cut during the evening previous to the dance; and early the next morning, all the young men of the tribe ran a race to see who could reach the tree first. (With this compare the tradition of the race for the sacred pole, § 36, and the race for the tree, which is to be used for the sun-dance, as practiced among the Dakotas). He also says that when the sham fight ended early in the afternoon, the Hede-watci could follow the same day. (In that event, the tree had to be found and cut on the preceding day, and the race for it was held early in the morning before the anointing of the sacred pole.) In the race for the tree, the first young man who reached it and touched it, could carry the larger end on his shoulder; the next one who reached it walked behind the first as they bore the tree on their shoulders; and so on with the others, as many as were needed to carry the tree, the last one of whom had to touch the extreme end with the tips of his fingers. The rest of the young men walked in single file after those who bore the tree. Frank La Flèche never heard of the practice of any sacred rites previous to the felling of the tree. Nothing was prepared for the tree to fall on, nor did they cause the tree to fall in any particular direction, as was the case when the Dakotas procured the tree for the sun-dance.[14]

In the sun-dance, the man who dug the "ųjéǫi" in the middle of the tribal circle for the sun-pole had to be a brave man, and he was obliged to pay for the privilege. Frank La Flèche could not tell whether there were similar requirements in the case of him who dug the ųjeǫi for the pole in the Hede-watci; nor could he tell whether the man was always chosen from the Iñke-sabĕ gens.

When the men who bore the tree reached the camp they planted it

[14] None of the questions answered by Frank La Flèche were asked by the writer while Joseph La Flèche and Two Crows were in Washington; it was not till he heard Miss Fletcher's article on the Dakota sun-dance that it occurred to him that similar customs might have been practiced by the Omahas in this Hede-watci.

in the uje¢i,[15] or hole in the ground, which had been dug in the center of the tribal circle. After the planting of the tree, from which the topmost branches had not been cut, an old man of the gens was sent around the tribal circle as crier. According to Big Elk, he said, "You are to dance! You are to keep yourselves awake by using your feet!" This implied that the dance was held at night; but Frank La Flèche says that none of the regular dancing of the Hede-watci occurred at night, though there might be other dancing then, as a sort of preparation for the Hede-watci. In like manner, Miss Fletcher told of numerous songs and dances, not part of the sun-dance, which preceded that ceremony among the Dakotas.

The Iñke-sabĕ men cut some sticks in the neighborhood of their tents and sent them around the camp, one being given to the chief of each gens. Then the latter said to his kinsmen, "They have come to give us the stick because they wish us to take part in the dance." Then all the people assembled for the dance. In modern times, those who thought much of themselves (chiefs and others) did not go to witness this dance, but staid at home, as did Joseph La Flèche. Nearly all the young men and boys wore nothing but their breechcloths, and their bodies were smeared over with white clay. Here and there were young men who wore gay clothing. The women and girls wore good dresses, and painted the partings of their hair and large round spots on their cheeks with red paint. Near the pole were the elder men of the Iñke-sabĕ gens, wearing robes with the hair outside; some of them acted as singers and others beat the drums and rattles; they never used more than one or two drums and four gourd rattles. It is not certain which Iñke-sabĕ men acted as singers, and which ones beat the drums and rattles. When Frank La Flèche witnessed this dance he says that the singers and other musicians sat on the west side of the pole and outside the circle of the dancers; but Joseph La Flèche, Two Crows, and Big Elk agreed in saying that their place was within the circle of the dancers and near the pole. This was probably the ancient rule, from which deviations have been made in recent times. The two sacred pipes occupied important places in this dance; each one was carried on the arm of a young man of the gens, but it was not filled.[16] These two young men were the leaders of the dance, and from this circumstance originated the ancient proper name, ⌊a$^{n}$¢i$^{n}$-na$^{n}$ba, Two Running. According to Frank La Flèche, these two young men began the dance on the west side of the pole, standing between the pole and the singers. The songs of this dance

[15] This word "uje¢i" appears to be the Dakota "otoeti," *fire-place*, expressed in Omaha notation. As the household fire-place is in the center of the lodge, so the tribal fire-place was in the center of the tribal circle.

[16] Frank Fa Flèche said that the two pipes used in the Hede-watci were the weawa$^{n}$, from which the ducks' heads were removed, and instead of them were put on the red pipe bowls of the sacred pipes. (See § 30.)

were sacred, and so they are never sung except during this ceremony. Of the members of the tribe, those on foot danced around the pole, while those who wished to make presents were mounted and rode round and round the circle of the dancers. The men and boys danced in a peculiar course, going from west to south, thence east and north, but the women and girls followed the course of the sun, dancing from the east to the south, thence by the west to the north. The male dancers were nearer the pole, while the females danced in an outer circle. When a horseman wished to make a present he went to one of the bearers of the sacred pipes, and, having taken the pipe by the stem, he held it toward the man to whom he desired to give his horse. The man thus favored, took the end of the stem into his mouth without touching it with his hand and pretended to be smoking, while the other man held the pipe for him ("uiɬaⁿ"). The recipient of the gift then expressed his thanks by extending his hands, with the palms towards the donor, saying, "Hau, kageha!" *Thanks, my friend!* Each male dancer carried a stick of hard willow trimmed at the bottom, but having the branches left at the top (in imitation of the cottonwood pole). Each stick was about five feet high, and was used as a staff or support by the dancers. After all had danced four times around the circle, all the males threw their sticks toward the pole; the young men threw theirs forcibly in sport, and covered the heads of the singers and musicians, who tried to avoid the missiles; This ended the ceremony, when all the people went to their respective tents. Those who received the horses went through the camp, yelling the praises of the donors.

§ 154. *Division of the tribe into two hunting parties during the summer hunt.*—Sometimes the tribe divided, each party taking in a different route in search of the buffalo. In such cases each party made its camping circle, but without pitching the tents according to the gentes; all consanguinities and affinities tried to get together. Those who belonged to the party that did not have the two sacred Hañga tents could not perform any of the ceremonies which have been described in §§ 143 and 151. All that they could do was to prepare the hides and meat for future use. They had nothing to do with the anointing of the sacred pole, sham fight, and Hede-watci, which ceremonies could not be performed twice during the year.

§ 155. When the two parties came together again, if any person in either party had been killed, some one would throw himself on the ground as soon as they got in sight, as a token to the others of what had occurred.

§ 156. *Two tribes hunting together.*—Occasionally two tribes hunted together, as was often the case with the Omahas and Ponkas. Frank La Flèche says that when this was done some of the Ponkas joined the Omahas in the sham fight; but he does not know whether the Ponkas have similar ceremonies. They have no sacred pole, ɲe-saⁿ-ha, nor sacred

tents, though they claim a share in the sacred pole of the Omahas, and they have sacred pipes.

§ 157. *Hunting party attacked by foes.*—When a hunting party was suddenly attacked by an enemy the women used to dig pits with their knives or hoes, and stoop down in them in company with the children, to avoid the missiles of the combatants. If the tribe was encamped at the time, the pits were dug inside the tribal circle. Sometimes the children were placed in such pits and covered with skins, over which a quantity of loose earth was quickly thrown; and they remained concealed till it was safe for them to come forth. On one occasion, when the Dakotas had attacked the camp, an Omaha woman had not time to cover the children with a skin and earth, so she threw herself over them and pretended to be dead. The Dakotas on coming up thought that she was dead, so they contented themselves with scalping her, to which she submitted without a cry, and thus saved herself as well as the children.

When there was danger of such attacks the people continued their journey throughout the night. So the members of the different households were constantly getting separated. Mothers were calling out in the darkness for their little ones, and the young men replied in sport, "Here am I, mother," imitating the voices of the children.

§ 158. *Return of the tribe from the summer hunt.*—The people started homeward immediately after the sham fight and the Hede-watci. But there were always four runners who were sent about five or six days in advance of the main body. These runners were always volunteers. They traveled all the time, each one carrying his own food. Not one waited for the others. They never pitched a tent, but simply lay down and slept. Whenever one waked, even though it was still night, he started again, without disturbing the others if they were asleep. They always brought pieces of meat to those who had remained at home. Their approach was the signal for the cry, "Íkima$^{n}$'¢i$^{n}$ ag¢íi, hŭ$^{n}$+!"—*The messengers have come back, halloo!* In the course of a few days all of the people reached home; but there were no religious ceremonies that ensued. They always brought tongues to those who had staid at home.

§ 159. *Abae, or hunting the larger animals.*—No religious ceremonies were observed when a man went from home for a few days in order to procure game. The principal animals hunted by the Omahas and Ponkas were the elk, deer, black bear, grizzly bear, and rabbit.

When a deer was killed it was generally divided into four parts. Two parts were called the "ʒe-¢íʒi$^{n}$" or ribs, with which were given the fore legs and the "ʒe-na$^{n}$'qa" or hump. Two parts were the "ʒe-jéga" or thighs, *i. e.*, the hind quarters. When the party consisted of five men the ʒe-na$^{n}$qa was made the share of the fifth; and when there were more persons present the fore legs were cut off as shares. When an elk was killed it was generally divided into five parts. The "ʒe-ju" or fore quarters were two parts, with which went the fore legs. The

ʇe-jega or hind quarters made two more parts, with one of which went the paunch, and with the other the entrails. The ʇe-naⁿqa was the fifth part; and when the elk was large a sixth share was formed by cutting off the "ʇe-mañge" or chest.

Frank La Flèche does not know how the black bears used to be divided, as there have been none found on the Omaha reservation for the past fourteen years.

§ 160. If one shoots a wild turkey or goose (miⁿxa), another person standing near may run up and take the bird if he can get there first, without saying anything. The slayer cannot say, "Give it to me." He thinks that he can get the next one which he kills. The same rule applies to a raccoon. But when one catches a beaver in a trap he does not give it away.

§ 161. *Trapping.*—Since the coming of the white men the Omahas have been making small houses or traps of sticks about a yard long, for catching the miɣasi (prairie wolves), big wolves, gray foxes, and even the wild cat.

## FISHING CUSTOMS.

§ 162. Before the advent of the white man the Omahas used to fish in two ways. Sometimes they made wooden darts by sharpening long sticks at one end, and with these they speared the fish. When the fish appeared on the surface of the water they used to shoot them with a certain kind of arrows, which they also used for killing deer and small game. They spoke of the arrows as "násize gáxe," because of the way in which they were prepared. No arrowheads were used. They cut the ends of the shafts to points; then about four inches of the end of each arrow next the point was held close to a fire, and it was turned round and round till it was hardened by the heat.

Since the coming of the whites, the Omahas have learned to make fishing-lines of twisted horse-hair, and these last a long time. They do not use sinkers and floats, and they never resort to poison for securing the fish. Both Ponkas and Omahas have been accustomed to fish as follows in the Missouri River: A man would fasten some bait to a hook at the end of a line, which he threw out into the stream, after securing the other end to a stake next the shore; but he took care to conceal the place by not allowing the top of the stick to appear above the surface of the water. Early the next morning he would go to examine his line, and if he went soon enough he was apt to find he had caught a fish. But others were on the watch, and very often they would go along the bank of the river and feel under the water for the hidden sticks, from which they would remove the fish before the arrival of the owner of the lines.

*Hú-bigide, weirs or traps for catching fish.*—La Flèche and Two Crows do not think that this was an ancient practice. Children now catch fish in this manner. They take a number of young willows of the species called "ɸíxe-sagi," or hard willow, and having bent them down, they interlace them beneath the surface of the water. When the fish attempt to force their way through they are often caught in the interstices, which serve as meshes. But if the fish are large and swim on the surface they can leap over and escape.

The Omahas eat the following varieties of fishes: ɻúzĕ, or Missouri catfish; hu-í-buɻa, "round-mouthed-fish," or buffalo-fish; hu-hiⁿ'pa, or sturgeon; hú-da-snéde, "long-nosed fish," or gar; and the hu-gɸéje, or "spotted fish." The last abounds in lakes, and is generally from 2½ to 3 feet long. It has a long nose.

## CULTIVATION OF THE GROUND.

§ 163. This is regulated by the Hañga gens, as corn and the buffalo meat are both of great importance, and they are celebrated in the sacred songs of the Hañga when the feast is made after the offering of the buffalo hearts and tongues. (§ 143.)

Corn is regarded as a "mother" and the buffalo as a "grandfather." In the Osage tradition corn was bestowed on the people by four buffalo bulls. (See Calumet dance, § 123, and several myths, in Part I, Contributions to N. A. Ethnology, Vol. VI.)

At harvest one of the keepers of the Hañga sacred tents (Frank La Flèche thinks it is the Wacabe or ⌊e-saⁿ-ha keeper) selects a number of ears of red corn, which he lays by for the next planting season. All the ears must be perfect ones. (See Calumet dance, § 123.)

In the spring, when the grass comes up, there is a council or tribal assembly held, to which a feast is given by the head of the Hañga gens. After they decide that planting time has come, and at the command of the Hañga man, a crier is sent through the village. He wears a robe with the hair outside, and cries as he goes, "Waɸa'e te, ai aɸá u+!"—*They do indeed say that you will dig the ground! Halloo!* He carries the sacred corn, which has been shelled, and to each household he gives two or three grains, which are mixed with the ordinary seed-corn of that household. After this it is lawful for the people to plant their corn. Some of the Iñke-sabĕ people cannot eat red corn. This may have some connection with the consecration of the seed-corn.

## CHAPTER VIII.

### INDUSTRIAL OCCUPATIONS (CONTINUED).

#### FOOD AND ITS PREPARATION.

§ 164. *Meat.*—They ate the "ʒa," or dried meat of the buffalo, elk, deer, but seldom tasted that of the beaver. They cut the meat in slices (wága), which they cut thin (mábɸeɥa), that it might soon dry. It was then dried as explained in § 150. Before drying it is "ʒa-núɥa," wet or fresh meat. The dried meat used to be cooked on glowing coals. When the meat was dried in the summer it lasted for the winter's use, but by the next summer it was all consumed. In the ⊥ada and Weji$^{n}$cte gentes venison and elk meat could not be eaten, and certain parts of the buffalo could not be eaten or touched by the Iñke-sábĕ, Hañga, ⊥e-da-it'ajĭ, ⊥e-sĭnde, and Iñgɸe-jide. (See §§ 31, 37, 49, 59, and 67.)

The marrow, wajíbe, was taken from the thigh bones by means of narrow scoops, or wébagude, which were made out of any kind of stick, being blunt at one end. They were often thrown away after being used.

The vertebræ and all the larger bones of the buffalo and other animals are used for making wahi-wegɸi, *bone grease*, which serves as butter and lard. In recent times hatchets have been used to crush the bones, but formerly stone axes (i$^{n}$'-igaga$^{n}$ or i$^{n}$'-igacíje) were employed, and some of these may still be found among the Omahas. Now the Omahas use the i$^{n}$'-wate, a large round stone, for that purpose. The fragments of the bones are boiled, and very soon grease arises to the surface. This is skimmed off and placed in sacks for future use. Then the bones are thrown out and others are put in to boil. The sacks into which the grease is put are made of the muscular coating of the stomach of a buffalo, which has been dried, and is known as "ínijeha."

They ate the entrails of the buffalo and the elk. Both the small and large intestines were boiled, then turned inside out and scraped to get off the remains of the dung which might be adhering to them. Then they were dried. According to Two Crows, the iñgɸe, or dung of the buffalo, is not "bɸa$^{n}$-píäjĭ," *offensive*, like that of the domestic cow. Though the buffalo cow gives a rich milk, the Indians do not make use of that of such as they kill in hunting.

§ 165. La Flèche and Two Crows never heard of any Omahas that ate lice, but the writer saw an aged Ponka woman eat some that she took from the head of her grandson. The following objects are not eaten by any of the gentes: Dried fish, slugs, dried crickets, grass-

hoppers, or other insects, and dried fish-spawn. Nor do they ever use as drinks fish-oil or other oils.

§ 166. *Corn*, Wataⁿzi.—La Flèche and Two Crows mention the following varieties as found among the Omahas: 1. Wataⁿ'zi skă, white corn, of two sorts, one of which, wataⁿ'zi-kúgȼi, is hard; the other, wataⁿ'zi skă proper, is wat'éga, or tender. 2. Wataⁿ'zi ąu, blue corn; one sort is hard and translucent, the other is wat'ega. 3. Wataⁿ'zi zi, yellow corn; one sort is hard and translucent, the other is wat'ega. 4. Wataⁿ'zi gȼejé, spotted corn; both sorts are wat'ega; one is covered with gray spots, the other with red spots. 5. Wataⁿ'zi ąú-jide, a "a reddish-blue corn." 6. Wataⁿ'zi jídĕqti, "very red corn." 7. Wataⁿ'zi ígaxúxu, zí kĭ jíde ihâhai, ugáai égaⁿ, *figured corn, on which are yellow and red lines, as if painted.* 8. Waȼástage, of three sorts, which are the "sweet corn" of the white people; waȼastage skă, which is translucent, but not very white; waȼastage zi, which is wat'ega and yellow, and waȼastage ąu, which is wat'ega and blue. All of the above varieties mature in August. Besides these is the Wajút'aⁿ-kúȼĕ, "that which matures soon," the squaw corn, which first ripens in July.

§ 167. *Modes of cooking the corn.*—Before corn is boiled the men call it wataⁿ'zi sáka, raw corn; the women call all corn that is not boiled "saȼáge." Wataⁿzi skíȼĕ, sweet corn, is prepared in the following ways: When the corn is yet in the milk or soft state it is collected and boiled on the cob. This is called "wabȼúga" or "wabȼúga ąañga," because the corn ear (wahába) is put whole (bȼuga) into the kettle. It is boiled with beans alone, with dried meat alone, with beans and dried meat, or with a buffalo paunch and beans.

Sometimes the sweet corn is simply roasted before it is eaten; then it is known as "wataⁿ'zi skíȼĕ úhaⁿ-bájĭ, *sweet corn that is not boiled.*" Sometimes it is roasted on the ear with the husks on, being placed in the hot embers, then boiled, shelled, and dried in the sun, and afterwards packed away for keeping in *parflèche* cases. The grain prepared in this manner has a shriveled appearance and a sweet taste, from which the name is derived. It may be boiled for consumption at any time of the year with but little trouble, and its taste closely resembles that of new corn. Sometimes it is boiled, shelled, and dried without being roasted; in this case, as in the preceding one, it is called "wataⁿ'zi skíȼĕ uhaⁿí, *boiled sweet corn.*" This sweet corn may be boiled with beans alone, or with beans, a buffalo paunch, pumpkins, and dried meat; or with one or more of these articles, when all cannot be had.

They used to make "waȼískiskída, corn tied up." When the corn was still juicy they pushed off the grains having milk in them. These were put into a lot of husks, which were tied in a bundle, and that was placed in a kettle to boil. Beans were often mixed with the grains of corn before the whole was placed in the husks. In either case waȼiskiskida was considered very good food.

Dougherty said, "They also pound the sweet corn into a kind of

small hominy, which when boiled into a thick mush, with a proper proportion of the smaller entrails and jerked meat, is held in much estimation." The writer never heard of this.

The corn which is fully ripe is sometimes gathered, shelled, dried, and packed away for future use.

Hominy, wabi'ɔnude or wanáɔnudéɸĕ, is prepared from hard corn by boiling it in a lye of wood ashes for an hour or two, when the hard exterior skin nearly slips off (náɔnude). Then it is well washed to get rid of the ashes, and rinsed, by which time the bran is rubbed off (biɔnúde). When needed for a meal it may be boiled alone or with one or more of the following: Pumpkins, beans, or dried meat. Sometimes an ear of corn is laid before the fire to roast (jé'aⁿhe), instead of being covered with the hot ashes.

Wanin'de or mush is made from the hard ripe corn by beating a few grains at a time between two stones, making a coarse meal. The larger stone is placed on a skin or blanket that the flying fragments may not be lost. This meal is always boiled in water with beans, to which may be added pumpkins, a buffalo paunch, or dried meat.

When they wish to make wanin'de-gáskĕ, or ash-cake, beans are put on to boil, while the corn is pounded in a mortar that is stuck into the ground. When the beans have begun to fall to pieces, but before they are done, they are mixed with the pounded corn, and made into a large cake, which is sometimes over two feet in diameter and four inches thick. This cake is baked in the ashes. Occasionally corn-husks are opened and moistened, and put over the cake before the hot ashes are put on.

At times the cake is made of mush alone, and baked in the ashes with or without the corn husks.

ɸibɸúbɸuga, corn dumplings, are made thus: When the corn has been pounded in a mortar, some of it is mixed with water, and beans are added if any can be had. This is put in a kettle to boil, having been made into round balls or dumplings, which do not fall to pieces after boiling. The rest of the pounded corn is mixed with plenty of water, being "nigɸuze," *very watery*, and is eaten as soup with the dumplings.

Another dish is called "Aⁿ'bagɸe." When this is needed, they first boil beans. Then, having pounded corn very fine in a mortar, they pour the meal into the kettle with the beans. This mixture is allowed to boil down and dry, and is not disturbed that night. The next day when it is cold and stiff the kettle is overturned, and the aⁿbagɸe is pushed out.

Wacañ'ge is made by parching corn, which is then pounded in a mortar; after which the meal is mixed with grease, soup made from meat, and pumpkins. Sometimes it is mixed, instead with honey. Then it is made up into hard masses (ɸiskíski) with the hands. Dougherty says that with wacañge and waninde "portions of the ɜe-cibe, or smaller intestines of the buffalo are boiled, to render the food more sapid."

§ 168. *Melons, pumpkins, etc*, Sakaɸide ukeɸi$^{n}$, the common watermelon, was known to the Omahas before the coming of the white men. It has a green rind, which is generally striped, and the seeds are black. It is never dried, but is always eaten raw, hence the name. They had no yellow sakaɸide till the whites came; but they do not eat them.

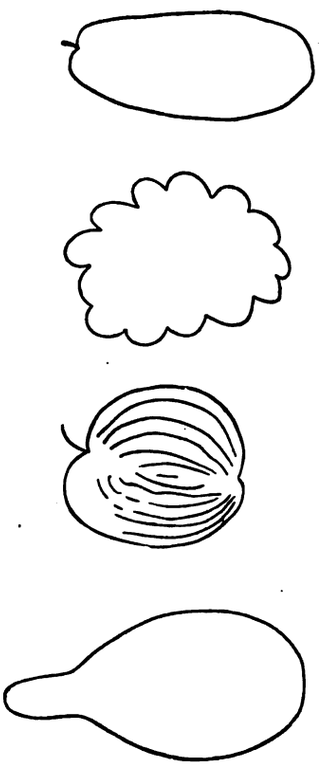


FIG. 26.—Figures of pumpkins.

The waʒa$^{n}$qti is at the top; the next is the waʒa$^{n}$ muxa; the third is the waʒa$^{n}$-jide; and the bottom one, the waʒa$^{n}$ ninde bazu.

Waʒa$^{n'}$, *Pumpkins*.—The native kinds are three: waʒa$^{n'}$-qti, waʒa$^{n'}$-kúkúge, and waʒa$^{n'}$-múxa. Waʒa$^{n}$-qti, the real pumpkins are generally greenish, and "bícka," round but slightly flattened on sides like turnips. They are usually dried, and are called "waʒa$^{n'}$-gazan'de," because they are cut in circular slices and hung together, as it were, in festoons (gazande).

The second variety is large, white, and striped; it is not good for drying. The waʒa$^{n}$-muxa are never dried. Some are white, others are "sábě ʒu éga$^{n}$, a sort of black or dark blue," and small. Others, the waʒa$^{n'}$-múxa gɸejé, are spotted, and are eaten before they become too ripe. In former days, these were the only sweet articles of food. Sometimes pumpkins are baked on coals (jégɸa$^{n}$).

Modern varieties are two: The wata$^{n}$-nin'de bazú and the wata$^{n'}$-jíde. The Omahas never plant the latter, as they do not regard it as desirable. They plant the former, which is from 2 to 2½ feet long, and covered with knots or lumps. The native pumpkins are frequently steamed, as the kettle is filled with them cut in slices with a very small quantity of water added. Pumpkins are never boiled with ʒe-cibe or buffalo entrails; but they can be boiled with a buffalo paunch, beans, dried meat, and with any preparation of corn.

§ 169. *Fruits and berries.*—Taspa$^{n'}$, red haws, are seldom eaten; and then are taken raw, not over two or three at a time. Clumps of the hawthorn abound on Logan Creek, near the Omaha reserve, and furnish the Omaha name for that stream, Taspa$^{n'}$-hi báʒe.

Wajíde-níka, which are about the size of haws, grow on low bushes in Northwest Nebraska. They are edible in the autumn.

Buffalo berries, the wajídě-qti, or real wajide, are eaten raw, or they are dried and then boiled before eating.

Ꝁañde, plums, though dried by the Dakotas, are not dried by the ɸegiha and Ꞁɔiwere, who eat them raw.

Na$^{n}$'pa, choke-cherries, are of two kinds. The larger ones or na$^{n}$'pa-ꞯañ'ga, abound in a region known as ɖizábahehe, in Northwest Nebraska, where they are very thick, as many as two hundred being found on a single bush. Some of the bushes are a foot high, others are about two feet in height. The choke-cherries are first pounded between two stones, and then dried. The smaller variety, or na$^{n}$'pa-jiñ'ga, grow on tall bushes. These cherries are dried.

Gube, hackberries, are the size of black peppers or the smaller cherries (na$^{n}$pa-jiñga). They are fine, sweet, and black. They grow on large trees (*Celtis occidentalis*), the bark of which is rough and inclined to curl up.

Ag¢añkamañge, raspberries, are dried and boiled. Bacte, strawberries, are not dried. They are eaten raw.

Ja$^{n}$-qude-ju are berries that grow near the Niobrara River; they are black and sweet, about the size of buffalo berries. They are dried.

Nacama$^{n}$ is the name of a species of berry or persimmon (?), which ripens in the later fall. It hangs in clusters on a small stalk, which is bent over by the weight of the fruit. The nacama$^{n}$ is seldom eaten by the Omahas. It is black, not quite the size of a hazel nut; and its seed resemble watermelon seed.

Hazi, grapes—one kind, the fox grape, is eaten raw, or dried and boiled.

§170. *Nuts.*—The "búde" is like the acorn, but it grows on a different tree, the trunk of which is red (the red oak?). These nuts are ripe in the fall. They are boiled till the water has nearly boiled away, when the latter is poured out, and fresh water and good ashes are put in. Then the nuts are boiled a long time till they become black. The water and ashes are thrown out, fresh water is put in the kettle, and the nuts are washed till they are clean, when they are found to be "náꞯube," cooked till ready to fall to pieces. Then they are mixed with wild honey, and are ready for one to eat. They are "íb¢a$^{n}$qtiwá¢ĕ," capable of satisfying hunger to the utmost, but a handful being necessary for that end.

A$^{n}$'jiñga, hazel nuts, are neither boiled nor dried; they are eaten raw The same may be said of "ꞯáge," black walnuts.

§ 171. Fruits were preserved in wild honey alone, according to J. La Flèche. Since the arrival of the white people a few of the Omahas have cultivated sorghum; but in former days the only sugars and sirups were those manufactured from the sugar maple and box elder or ash-leaved maple.

The Omahas know nothing about pulse, mesquite, and screw-beans. Nor do they use seeds of grasses and weeds for food.

Previous to the arrival of the whites they did not cultivate any garden vegetables; but now many of the Omahas and Ponkas have raised many varieties in their gardens.

§ 172. *Roots used for food.*—The núg¢e or Indian turnip is sometimes

round, and at others elliptical. When the Omahas wish to dry it, they pull off the skin. Then they cut off pieces about two inches long, and throw away the hard interior. Then they place these pieces in a mortar and pound them, after which they dry them. When they are dried they are frequently mixed with grease. Occasionally they are boiled with dried meat without being pounded. The soup is very good.

Nú ukéɸiⁿ, or *Pomme de terre*, the native potato, is dug in the winter by the women. There are different kinds of this root, some of which have good skins. Several grow on a common root, thus: ⊙⊙⊙⊙ These potatoes are boiled; then the skins are pulled off, and they are dried.

The "siⁿ" is an aquatic plant, resembling the water-lily. It is also called the "siⁿ'-ukéɸiⁿ," being the wild rice. In order to prepare it as food it is roasted under hot ashes.

The other rice is the "siⁿ'-wanin'de"; the stalk on which it grows is the "siⁿ'-wanin'de-hi," a species of rush which grows with rice in swamps. The grain is translucent, and is the principal article of diet for those Indians who reside in very cold regions north of the Ponkas.

Siⁿ'-skuskúba, which some Ponkas said was the calamus, is now very rare. Few of the Omahas know it at present. They used to eat it after boiling it. Frank La Flèche said that this could not be calamus, as the Omahas called that makaⁿ-ninida, and still eat it.

§ 173. *Beans.*—Beans, hiⁿbɸiñ'ge or haⁿbɸiñ'ge, are planted by the Indians. They dry them before using them. Some are large, others are small, being of different sizes. The Indians speak of them thus: "búɻa-hnaⁿi, bɸáska égaⁿ," *they are generally curvilinear, and are some what flat.*

La Flèche and Two Crows speak of many varieties, which are probably of one and the same species: "Hiⁿbɸiñge sábĕ gɸejé, beans that have black spots. 2. Skă gɸejé, those with white spots. 3. Zi'gɸejé, those with yellow spots. 4. Jíde gɸejé, those with red spots. 5. Qúde gɸejé, those with gray spots. 6. Jídĕqti, very red ones. 7. Sábĕqti, very black ones. 8. Jíde cábe égaⁿ, those that are a sort of dark red. 9. Skă, white. 10. ɻu égaⁿ sábĕ, dark blue. 11. Ji' égaⁿ sábĕ, dark orange red. 12. Skă, ugɸe tĕ jide, white, with red on the "ugɸe" or part that is united to the vine. 13. Hi-ugɸé tĕ sabĕ, those that are black on the "ugɸe." 14. ɻu gɸeje egaⁿ, blue, with white spots. 15. Aⁿpaⁿ hiⁿ egaⁿ, qude zi egaⁿ, like the hair of an elk, a sort of grayish yellow.

The hiⁿbɸiⁿ'ⁿabe, or hiⁿbɸiñge maⁿtanaha, wild beans, are not planted. They come up of their own accord. They are flat and curvilinear, and abound under trees. The field-mice hoard them in their winter retreats, which the Indians seek to rob. They cook them by putting them in hot ashes.

§ 174. *ɻeɸawe* is the name given to the seeds and root of the *Nelumbium luteum*, and is thus described by an Omaha: The ɻeɸawe is the root of an aquatic plant, which is not very abundant. It has a leaf like that of a lily, but about two feet in diameter, lying on the surface

of the water. The stalk comes up through the middle of the leaf, and projects about two feet above the water. On top is a seed-pod. The seed are elliptical, almost shaped like bullets, and they are black and very hard. When the ice is firm or the water shallow, the Indians go for the seed, which they parch by a fire, and beat open, then eat. They also eat the roots. If they wish to keep them for a long time, they cut off the roots in pieces about six inches long, and dry them; if not, they boil them.

§ 175. Hi$^{n}$'qa is the root of a sahi or water grass which grows beneath the surface of Lake Nik'umi, near the Omaha Agency, Nebraska. This root, which is about the size of the first joint of one's forefinger, is bulbous and black. When the Omaha boys go into bathe they frequently eat it in sport, after pulling off the skin. Two Crows says that adults never eat it. J. La Flèche never ate it, but he has heard of it.

§ 176. *Savors, flavors, etc.*—Salt, ni-skíȼĕ, was used before the advent of the whites. One place known to the Omahas was on Salt River, near Lincoln, Nebr., which city is now called by them "Ni-skiȼĕ." At that place the salt collected on top of the sand and dried. Then the Omahas used to brush it together with feathers and take it up for use. What was on the surface was very white, and fit for use; but that beneath was mixed with sand and was not disturbed. Rock salt was found at the head of a stream, southwest of the Republican, which flowed into the northwest part of the Indian Territory, and they gave the place the name, "Ni-skíȼĕ sagí ȼa$^{n}$, *Where the hard salt is.*" In order to get this salt, they broke into the mass by punching with sticks, and the detached fragments were broken up by pounding.

Peppers, aromatic herbs, spices, etc., were not known in former days. Clay was never used as food nor as a savor.

§ 177. *Drinks.*—The only drinks used were soups and water. Teas, beer, wine, or other fermented juices, and distilled liquors, were unknown. (See § 109.)

§ 178. *Narcotics.*—Native tobacco, or niní. The plant, niní-hi was the only narcotic known previous to the coming of our race. It differs from the common tobacco plant; none of it has been planted in modern times. J. La Flèche saw some of it when he was small. Its leaves were "ꝗú-qude égan," a sort of a blue color, and were about the size of a man's hand, and shaped somewhat like a tobacco leaf. Mr. H. W. Henshaw, of the United States Geological Survey, has been making some investigations concerning the narcotics used by many of the Indian tribes. He finds that the Rees and other tribes did have a native tobacco, and that some of it is still cultivated. This strengthens the probability that the niní of the Omahas and Ponkas was a native plant.

Mixed tobacco or killickinnick is called ninígahi by the Omahas and Ponkas. This name implies that native or common tobacco (niní) has been mixed (igahi) with some other ingredient. "This latter is generally the inner bark of the red willow (*Cornus sericea*), and occasionally

it is composed of sumac leaves (*Rhus glabrum*). When neither of these can be had the inner bark of the arrow wood (*Viburnum*) or maⁿ'sa-hi is substituted for them. The two ingredients are well dried over a fire, and rubbed together between the hands." (Dougherty, in *Long's Expedition*, I.)

"In making ninígahi, the inner bark of the dogwood, to which are sometimes added sumac leaves, is mixed with the tobacco. Sometimes they add wajide-hi ha, the inner bark of rose-bushes. When they cannot get dogwood or sumac they may use the bark of the maⁿsa hi or arrow-wood. The bark of the ɸixe sagi, or hard willow, is not used by the Omahas." (Frank La Flèche.)

## CLOTHING AND ITS PREPARATION.

§ 179. Garments were usually made by the women, while men made their weapons. Some of the Omahas have adopted the clothing of the white man. There is no distinction between the attire of dignitaries and that of the common people.

§ 180. There were no out-buildings, public granaries, etc. Each household stored away its own grain and other provisions. There were no special tribal or communal dwellings, but sometimes two or more families occupied one earth lodge. When a tribal council was held, it was in the earth lodge of one of the principal chiefs, or else two or three common tents were thrown into one, making a long tent.

There were no public baths, as the Missouri River was near, and they could resort to it when they desired. Dances were held in earth lodges, or else in large skin tents, when not out of doors.

§ 181. *Dressing hides.*—The hides were stretched and dried as soon as possible after they were taken from the animals. When a hide was stretched on the ground, pins were driven through holes along the border of the hide. These holes had been cut with a knife. While the hide was still green, the woman scraped it on the under side by pushing a wébajábe over its surface, thus removing the superfluous flesh, etc. The wébajábe was formed from the lower bone of an elk's leg, which had been made thin by scraping or striking ("gabɸeɣa"). The lower end was sharpened by striking, having several teeth-like projections, as in the accompanying figure (B). A withe (A) was tied to the upper end, and this was secured to the arm of the woman just above the wrist.

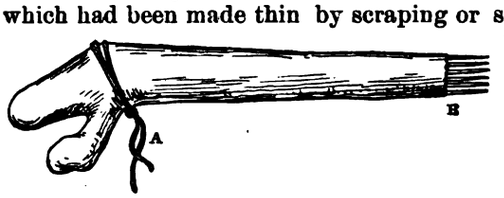


FIG. 27.—The Webajabe.

When the hide was dry the woman stretched it again on the ground, and proceeded to make it thinner and lighter by using another imple-

ment, called the wéubájaⁿ, which she moved towards her after the manner of an adze. This instrument was formed from an elk horn, to the lower end of which was fastened a piece of iron (in recent times) called the wé'u-hi.

When the hide was needed for a summer tent, leggings, or summer clothing of any sort, the wéubájaⁿ was applied to the hairy side.

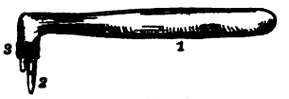



FIG. 28.—The Weubajaⁿ.

(1) The horn. (2.) The iron (side view). (3.) Sinew tied around the iron.

FIG. 29.—Front view of the iron.

It is about 4 inches wide.

When the hide was sufficiently smooth, grease was rubbed on it, and it was laid out of doors to dry in the sun. This act of greasing the hide was called "wawéɬiqɬi," because they sometimes used the brains of the elk or buffalo for that purpose. Brains, wéɬiqɬi, seem to have their name from this custom, or else from the primitive verb ɬiqɬi. Dougherty stated that, in his day, they used to spread over the hide the brains or liver of the animal, which had been carefully retained for that purpose, and the warm broth of the meat was also poured over it. Some persons made two-thirds of the brain of an animal suffice for dressing its skin. But Frank La Flèche says that the liver was not used for tanning purposes, though the broth was so used when it was brackish.

When the hide had been dried in the sun, it was soaked by sinking it beneath the surface of any adjacent stream. This act lasted about two days. Then the hide was dried again and subjected to the final operation, which was intended to make it sufficiently soft and pliant. A twisted sinew, about as thick as one's finger, called the wéɬikĭnde, was fastened at each end to a post or tree, about 5 feet from the ground. The hide was put through this, and pulled back and forth. This act was called waɬíkĭnde.

On the commencement of this process, called taⁿ'ɬĕ, the hides were almost invariably divided longitudinally into two parts each, for the convenience of the operator. When they were finished they were again sewed together with awls and sinew. When the hides were small they were not so divided before they were tanned. The skins of elk, deer, and antelopes were dressed in a similar manner.

# CHAPTER IX.

## PROTECTIVE INDUSTRIES.

### WAR CUSTOMS.

§ 182. The Indians say that Ictinike was he who taught their ancestors all their war customs, such as blackening the face. (See myth of Ictinike and the Deserted Children in Contributions to N. A. Ethnology, Vol. VI, Part I.)

*Origin of wars.*—Wars generally originated in the stealing of horses and the elopement of women, and sometimes they are in consequence of infringing on the hunting-grounds of one another. When a party of warriors go on the war-path they do not always go after scalps only; the object of the expedition may be to steal horses from the enemy. If they can get the horses without being detected they may depart without killing any one. But should they meet any of the people they do not hesitate to attempt their lives. If the followers or servants fail to bring away the horses it is the duty of the leaders to make an attempt.

§ 183. *Mode of fighting unlike that of nations of the Old World.*—War was not carried on by these tribes as it is by the nations of the Old World. The ɸegiha and other tribes have no standing armies. Unlike the Six Nations, they have no general who holds his office for life, or for a given term. They have no militia, ready to be called into the field by the government. On the contrary, military service is voluntary in all cases, from the private to the commanders, and the war party is usually disbanded as soon as home is reached. They had no wars of long duration; in fact, wars between one Indian tribe and another scarcely ever occurred; but there were occasional battles, perhaps one or two in the course of a season.

### DEFENSIVE WARFARE.

§ 184. When the foe had made an attack on the Omahas (or Ponkas) and had killed some of the people it was the duty of the surviving men to pursue the offenders and try to punish them. This going in pursuit of the foe, called níka-ɸíqĕ ɸé, was undertaken immediately without any of the ceremonies connected with a formal departure on the war-path, which was offensive warfare. When the Ponkas rushed to meet the Brulé and Ogala Dakotas, June 17, 1872, Húta$^{n}$-gi'hna$^{n}$, a woman, ran with them most of the way, brandishing a knife and singing songs to incite the men to action. The women did not always behave thus. They generally dug pits as quickly as possible and crouched in them in order to escape the missiles of the combatants. And after the fight

they used to seek for the fallen enemy in order to mutilate them. When some of the upper Dakotas had taken a prisoner they secured him to a stake and allowed their women to torture him by mutilating him previous to killing him, *etiam genitalia exciderunt.* But the writer never heard of the Φegiha women's having acted in this manner.

§ 185. *Preparation for the attack by the foe.*—About thirty-two years ago the Dakotas and Ponkas attacked the Omahas, but the latter had timely notice of their intentions and prepared for them. Four Omahas had found the camp of the enemy and reported to their friends that the foe would make the attack either that night or the next morning. So the Omahas made ready that night, having sent a crier around the tribal circle, saying, "They say that you must make an intrenchment for the children. The foe will surely come!" Then the people made an embankment around the greater part of the circle. It was about 4 feet high, and on the top were planted all the tent poles, the tents having been pulled down. The tent poles were interlaced and over these were fastened all the tent skins as far as they would go. This was designed as a screen for the men, while for the women and children was dug a trench about 4 or 5 feet deep, inside the embankment.

Mr. J. La Flèche, who was present during the fight, says that the embankment did not extend all around the circle, and that the area previously occupied by the tents of the end gentes, Weji$^{n}$cte, Ictasanda, etc., were not thus protected, and that he and others slept on the ground that night. Some of the men dug trenches for the protection of their horses. Early in the morning the crier went around, saying, "They say that you must do your best, as day is at hand. They have come!" The night scouts came in and reported having heard the sounds made by the tramping of the host of the advancing foe. Then the crier exhorted the people again, "They say that you must do your best! You have none to help you. You will lie with your weapons in readiness. You will load your guns. They have come!" Some of the Omahas fought outside of the embankment, others availed themselves of that shelter, and cut holes through the skins so that they might aim through them at the enemy. These structures for defense were made by digging up the earth with sticks which they had sharpened with axes. The earth thrown up made the embankment for the men, and the hollows or trenches were the uφihnucka into which the women and children retreated.

§ 186. *Old Ponka Fort.*—At the old Ponka Agency, in what was Todd County, Dakota Territory, may be seen the remains of an ancient fort, which the Ponkas say was erected over a hundred years ago by their forefathers. J. La Flèche saw it many years ago, and he says that the curvilinear intrenchment used to be higher than a man; *i. e.*, over six feet high. Many earth-lodges used to be inside. At the time it was built the Yanktons were in Minnesota, and the tribes who fought the Ponkas were the Rees, Cheyennes, and Pádañka (Camanches). Then the only Dakotas out of Minnesota were the Oglala and the Sitca$^{n}$xu

or Brulés. The former were on the White River and in the region of the Black Hills. The latter were in Nebraska, at the head of the Platte.

The fort had but one entrance. The situation was well chosen. The embankment occupied the greater part of a semi detached bluff. In front, and at one side, was the low bench of land next to the Missouri; at the rear was a ravine which separated it from the next bluff, and the only means of approach was by one side, next the head of the ravine. Then one had to pass along the edge of the ravine for over 200 yards in order to reach the entrance. The following sketch was drawn from memory, and Mr. La Flèche pronounced it substantially correct:

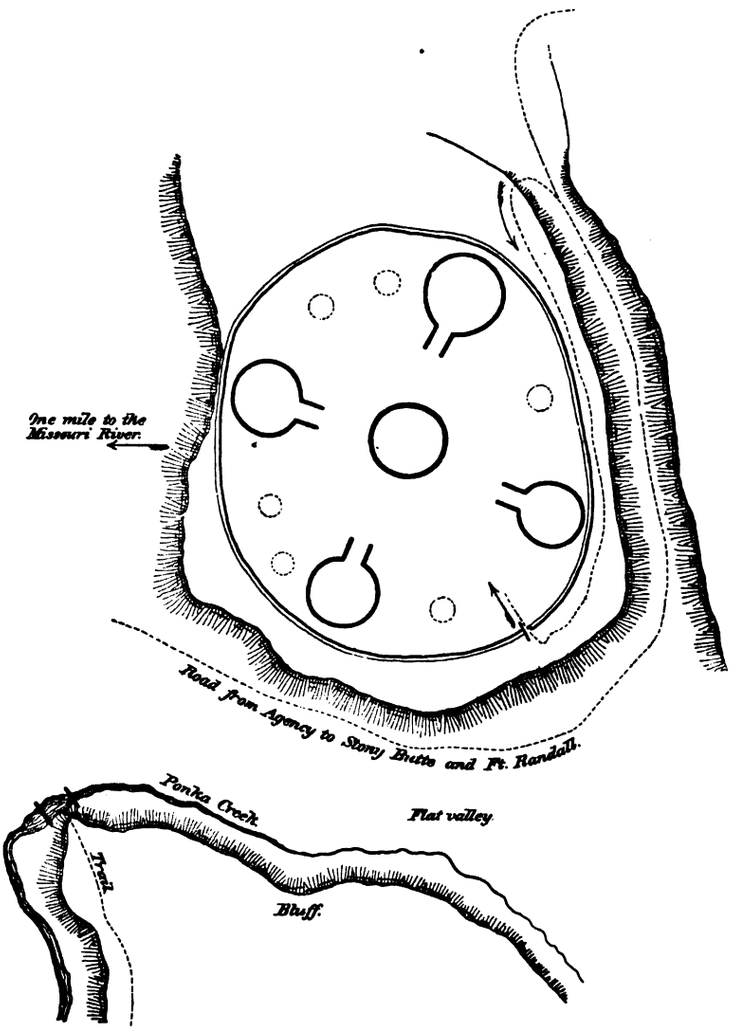



FIG. 30.—Old Ponka fort. The Missouri River is north of it.

### OFFENSIVE WARFARE.

§ 187. The first proposition to go on the war-path cannot come from the chiefs, who, by virtue of their office, are bound to use all their influence in favor of peace, except under circumstances of extraordinary provocation. It is generally a young man who decides to undertake an expedition against the enemy. Having formed his plan, he speaks thus to his friend: "My friend, as I wish to go on the war-path, let us go. Let us boil the food for a feast." The friend having consented, the two are the leaders or nuda$^{n}$'hañga, if they can induce others to follow them. So they find two young men whom they send as messengers to invite those whom they name. Each wágɸa or messenger takes one half of the gentile circle (if the tribe is thus encamped), and goes quietly to the tent of each one whom he has been requested to invite. He says at the entrance, without going in, "Kagéha, ɸíkui hă, ca$^{n}$'ɸiñkéi$^{n}$te."—*My friend, you are invited* (by such and such a one), *after he has been occupied awhile.* If the man is there, his wife replies to the messenger, "ɸikáge na'a$^{n}$' hĕ," *Your friend hears it.* Should the man be absent, the wife must reply, "ɸikáge ɸiñgéĕ hĕ; cuhí taté."—*Your friend is not (here); he shall go to you.* These invitations are made at night, and as quietly as possible, lest others should hear of the feast and wish to join the expedition; this, of course, refers to the organization of a nuda$^{n}$-jiñga or small war-party, which varies in number from two persons to about ten.

§ 188. *Small war party.*—After the return of the messengers, the guests assemble at the lodge or tent of their host. The places of the guests, messengers, and nuda$^{n}$hañga are shown in the diagram.

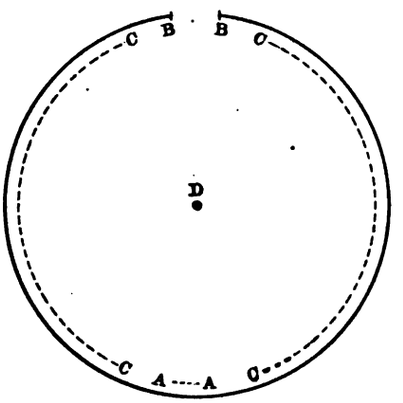



FIG. 31.—A, the nuda$^{n}$hañga, or captains; B, the wagɸa, or messengers; C, the guests; D, the food in kettles over the fire.

The two wéku or hosts sit opposite the entrance, while the messengers have their seats next the door, so that they may pass in and out and attend to the fire, bringing in wood and water, and also wait on the guests. Each guest brings with him his bowl and spoon.

When all have assembled the planner of the expedition addresses the company. "Ho! my friends, my friend and I have invited you to a feast, because we wish to go on the war-path." Then the young men say: "Friend, in what direction shall we go"? The host replies, "We desire to go to the place whither they have taken our horses."

Then each one who is willing to go, replies thus: "Yes, my friend, I am willing." But he who is unwilling replies, "My friend, I do not wish

to go. I am unwilling." Sometimes the host says, "Let us go by such a day. Prepare yourselves."

The food generally consists of dried meat and corn. ɹáɸi$^{n}$-na$^{n}$pájĭ said that he boiled fresh venison.

According to ɹaɸi$^{n}$-na$^{n}$pajĭ, the host sat singing sacred songs, while the leaders of those who were not going with the party sat singing dancing songs. Four times was the song passed around, and they used to dance four times. When the singing was concluded all ate, including the giver of the feast. This is denied by La Flèche and Two Crows. (See § 196.)

A round bundle of grass is placed on each side of the stick on which the kettle is hung. The bundles are intended for wiping the mouths and hands of the men after they have finished eating. At the proper time, each messenger takes up a bundle of the grass and hands it to the nuda$^{n}$hañga on his side of the fire-place. When the nuda$^{n}$hañga have wiped their faces and hands they hand the bundles to their next neighbors, and from these two they are passed in succession around to the door. Then the bundles are put together, and handed again to one of the nuda$^{n}$hañga, for the purpose of wiping his bowl and spoon, passing from him and his associate to the men on the left of the fire-place, thence by the entrance to those on the right of the fire-place to the nuda$^{n}$hañga. Then the messengers receive the bundle, and use it for wiping out the kettle or kettles. Then the host says, "Now! enough! Take ye it." Then the wagɸa put the grass in the fire, making a great smoke. Whereupon the host and his associate exclaim, "Hold your bowls over the smoke." All arise to their feet, and thrust their bowls into the smoke Each one tries to anticipate the rest, so the bowls are knocked against one another, making a great noise. This confusion is increased by each man crying out for himself, addressing the Wakanda, or deity of the thunder, who is supposed by some to be the god of war. One says, "Núda$^{n}$hañgá, wi$^{n}$' t'éaɸĕ támiñke."—*O war-chief! I will kill one.* Another, "Núda$^{n}$hañgá, cañ'ge wábɸize agɸí."—*O war-chief! I have come back with horses which I have taken.* (This and the following are really prayers for the accomplishment of the acts mentioned.) Another: "Núda$^{n}$hañgá, dá wi$^{n}$ bɸíqa$^{n}$."—*O war-chief! I have pulled a head, and broken it off.* Another, "Núda$^{n}$hañgá, ásku uɸíza$^{n}$qti wi$^{n}$ bɸíze hă."—*O war-chief! I, myself, have taken one by the very middle of his scalp-lock.* Another, 'Ú ɸiñgĕ'qti, núda$^{n}$hañgá, wi$^{n}$' ubɸa$^{n}$'."—*O war chief! I have taken hold of one who did not receive a wound.* And another, "Ábagɸaqti éde ubɸa$^{n}$' hă."—*He drew back as he was very doubtful of success* (in injuring me?), *but I* (advanced and) *took hold of him.* Those sitting around and gazing at the speakers are laughing. These lookers on are such as have refused to join the party. Then the guests pass in regular order around the circle, following the course of the sun, and passing before the host as they file out at the entrance. Each one has to go all around before he leaves the lodge.

§ 189. This feasting is generally continued four days (or nights); but if the occasion be an urgent one the men make hasty preparations, and may depart in less than four days. Each nuda$^{n}$hañgá boils the food for one night's feast; and what he prepares must differ from what is boiled by the other. Sometimes two leaders boil together on the same day; sometimes they take separate days, and sometimes when they boil on separate days they observe no fixed order, *i. e.*, the first leader may boil for two days in succession, then the second for one or two, or the second leader may begin and the first follow on the next day, and so on. When the supply of food failst he host may tell some of the wagáq¢a$^{n}$ or servants (who may be the messengers) to go after game.

§ 190. *Preparation for starting.*—Each warrior makes up a bundle composed of about fifteen pairs of moccasins, with sinew, an awl, and a sack of provisions, consisting of corn which has been parched. The latter is sometimes pounded and mixed with fat and salt. This is prepared by the women several days in advance of the time for departure. If the warriors leave in haste, not having time to wait for the sewing of the moccasins, the latter are merely cut out by the women. ɹa¢i$^{n}$-na$^{n}$pajĭ said that nearly all of the party had some object which was sacred, which they carried either in the belt or over one shoulder and under the opposite arm. La Flèche and Two Crows deny this, but they tell of such medicine in connection with the ɹa¢i$^{n}$-wasabe society. (See Chapter X.)

§ 191. *Secret departure.*—The departure takes place at night. Each man tries to slip off in the darkness by himself, without being suspected by any one. The leaders do not wish many to follow lest they should prove disobedient and cause the enemy to detect their proximity.

Another reason for keeping the proposed expedition a secret from all but the guests is the fear least the chiefs should hear of it. The chiefs frequently oppose such undertakings, and try to keep the young men from the war-path. If they learn of the war feast they send a man to find out whither the party intends going. Then the leaders are invited to meet the chiefs. On their arrival they find presents have been put in the middle of the lodge to induce them to abandon their expedition. (See Two Crows' war story, in Contributions to North American Ethnology, Vol. VI, Part I.)

The next day the people in the village say, "Ha$^{n}$'adi nuda$^{n}$' a¢a'-bikeamá."—*It is said that last night they went off in a line on the war-path.*

The warriors and the leaders blacken their faces with charcoal and rub mud over them. They wear buffalo robes with the hair out, if they can get them, and over them they rub white clay. The messengers or wag¢a also wear plumes in their hair and gird themselves with macaka$^{n}$, or women's pack-straps. All must fast for four days. When they have been absent for that period they stop fasting and wash their faces.

§ 192. *Uninvited followers.*—When a man notices others with weapons, and detects other signs of warlike preparation, should he wish to join

the party he begs moccasins, etc., from his kindred. When he is ready he goes directly after the party. The following day, when the warriors take their seats, the follower sits in sight of them, but at some distance. When one of the servants spies him he says to his captain, "Núda$^{n}$-hañgá, ¢éɟa aká wi$^{n'}$ atíi hă."—*O war chief! this one in the rear has come.* Then the captain says to all the warriors, "Hau, níkawasa$^{n'}$, íbaha$^{n}$-ba hi$^{n}$bé ctĭ ¢awái-gă. Ma$^{n'}$ tĕ ctĭ wégaska$^{n}$¢ái-gà."—*Ho, warriors! recognize him, if you can, and count your moccasins* (to see if you can spare him any). *Examine your arrows, too.* Then a servant is sent to see who the follower is. On his return he says, "War-chief (*or* captain), it is he," naming the man. The captain has no set reply; sometimes he says, "Ho, warriors! the man is active. Go after him. He can aid us by killing game." Or he may say, "Hau, nikawasa$^{n'}$! ní é¢i¢i$^{n}$ gí tĕ a¢i$^{n'}$ gíi-gă. Águdi ca$^{n'}$ɟañga náxi¢í¢í¢ĕ ɟĭ, gaha a¢ija$^{n}$ ga$^{n'}$¢ai ɟĭ, ca$^{n'}$ éja$^{n}$-mi$^{n'}$ hă."—*Ho, warriors! go for him that he may bring water for you. If he wishes to lie on you* (*i. e.*, on your bodies) *when the big wolves* (*or* the foe) *attack you, I think it is proper.* Then the scout goes after the follower.

But if the man be lazy, fond of sleeping, etc., and the scout reports who he is, they do not receive him. Once there was a man who persisted in going with war parties though he always caused misfortunes. The last time he followed a party the captains refused to receive him. Then he prayed to Wakanda to bring trouble on the whole party for their treatment of him. They were so much alarmed that they abandoned the expedition.

§ 193. *Officers.*—A small war party has for its chief officers two nuda$^{n}$-hañga, *partisans*, captains, or war chiefs. Each nuda$^{n}$hañga has his nuda$^{n'}$hañga-q¢éxe or lieutenant, through whom he issues his orders to the men. These lieutenants or adjutants are always chosen before the party leaves the village. After the food has been boiled the giver of the feast selects two brave young men, to each of whom he says, "Nuda$^{n'}$hañga-q¢éxe hni$^{n'}$ taté," *You shall be a nuda$^{n}$hañga-q¢exe.*

In 1854 Two Crows was invited by four others to aid them in organizing a large war party. But as they went to the feast given by the chiefs and received the presents they forfeited their right to be captains. Two Crows refused the gifts, and persisted in his design, winning the position of first captain. Wanace-jiñga was the other, and ɖa¢i$^{n}$-na$^{n}$pajĭ and Sĭnde-xa$^{n}$xa$^{n}$ were the lieutenants. In this case a large party was intended, but it ended in the formation of a small one. For the change from a small party to a large one see § 210.

§ 194. *Large war party.*—A large war party is called "Nuda$^{n'}$hi$^{n}$-ɟañ'ga." La Flèche and Two Crows do not remember one that has occurred among the Omahas. The grandfather of Two Crows joined one against the Panis about a hundred years ago. And Two Crows was called on to assist in organizing one in 1854, when fifty men were collected for an expedition which was prevented by the chiefs. Such par-

ties usually number one or two hundred men, and sometimes all the fighting men in the tribe volunteer. Occasionally the whole tribe moves against an enemy, taking the women, children, etc., till they reach the neighborhood of the foe, when the non-combatants are left at a safe distance, and the warriors go on without them. This moving with the whole camp is called "áwaha$^{n}$qti ɸé," or "ágaqɸa$^{n}$qti ɸé," because they go in a body, as they do when traveling on the buffalo hunt.

§ 195. When a large war party is desired the man who plans the expedition selects his associates, and besides these there must be at least two more nuda$^{n}$hañga; but only the planner and his friend are the nuda$^{n}$hañga úju, or principal war chiefs. Sometimes, as in the case of Wabaskaha (Contributions to N. A. Ethnology, Vol. VI, Part I, p. 394), the man paints his face with clay or mud, and wanders around, crying to Wakanda thus: "O Wakanda! though the foreigners have injured me, I hope that you may help me!" The people hear him, and know by his crying that he desires to lead a war party; so they go to him to hear his story.

Four wagɸa are sent to invite the guests, two taking each side of the tribal circle, and hallooing as they pass each tent. There is no cause for secrecy on such occasions, so the crier calls out the name of each guest, and bids him bring his bowl. In the case of Wabaskaha, so great was the wrong suffered that all the men assembled, including the chiefs. This was the day after Wabaskaha had told his story. Then a pipe (the war pipe) was filled. Wabaskaha extended his hands toward the people, and touched them on their heads saying, "Pity me; do for me as you think best." Then the chief who filled the sacred pipe said to the assembly, "If you are willing for us to take vengeance on the Pawnees, put that pipe to your lips; if (any of) you are unwilling, do not put it to your lips." Then every man put the pipe to his lips and smoked it. And the chief said, "Come! Make a final decision. Decide when we shall take vengeance on them." And one said, "O leader! during the summer let us eat our food, and pray to Wakanda. In the early fall let us take vengeance on them." The four captains were constantly crying by day and night, saying, "O Wakanda! pity me. Help me in that about which I am in a bad humor." They were crying even while they accompanied the people on the summer hunt. During the day they abstained from food and drink; but at night they used to partake of food and drink water.

§ 196. *Feast.*—It was customary for the guests invited to join a large war party to go to the lodge designated, where four captains sat opposite the entrance, and two messengers sat on each side of the door. The ensuing ceremonies were substantially those given in § 188, with the exception of the use of the waɸíxabe or sacred bags, which are never used except when large war parties are organized.

*Sacred bags.*—These sacred bags, which are consecrated to the thunder or war god, are so called because when the Indians went on the war-

path they used to ɸixábe or strip off the feathers of red, blue, and yellow birds, and put them into the sacred bags. There were five bags of this sort among the Omahas. The principal one is kept by Wackaⁿ′-maⁿɸiⁿ, of the Wajiñga-ɸatáji subgens of the ɸátada. It is filled with the feathers and skins of small birds, and is wrapped in a ɻahúpezi, or worn tent-skin. This is the principal one. The second one is kept by the daughter of ɻahé-jiñga, of the Iũké-sabĕ; because the people pity her, they allow her to keep the bag which her father used to have; but they do not allow her to take any part in the ceremonies in which the sacred bags are used. The third bag is in the custody of Máhiⁿ-ɸiñ′ge of the Wejiⁿcte gens. The fourth, when in existence, was kept by ɻidémaⁿɸiⁿ, of the ɻa-da gens. And the fifth was made by Wábaskaha, of the Iũgɸe′-jide gens. This, too, is no longer in existence. According to La Flèche and Two Crows, the only waɸixabe used in war are made of the (skin and feathers of the) gɸedaⁿ′, or pigeon-hawk, the iⁿ′be-jañ′ka, or forked-tail hawk, and the nickúcku, or martin. All three kinds were not carried by the same war party. Sometimes one man carries an iⁿbe-jañka, and the other a nickucku; at other times one carries a gɸedaⁿ, and the other an iⁿbe-jañka or nickucku. ɾaɸiⁿ-naⁿpajĭ says that the weasel is very sacred. Two Crows never heard this; and he says that the keeper of any very sacred object never reveals what it is. These sacred bags are not heavy; yet the bearer of one has no other work. He must wear his robe tied at the neck, and drawn around him even in warm weather.

At the feast, the three waɸixabe are put in the middle of the lodge. The keepers take their seats, and sing sacred songs, some of which are addresses to the Thunder, while others are dancing songs. Among the former is one of which a fragment was given by ɾaɸiⁿ-naⁿpajĭ:

"Wi-ɻi′-gaⁿ naⁿ′-pe-wa′-ɸĕ e-gaⁿ′,
Wi-ɻi′-gaⁿ naⁿ′-pe-wa′-ɸĕ e-gaⁿ′,
We′-tiⁿ kĕ gɸi′-haⁿ-haⁿ ɻĭ,
Naⁿ′-pe wá-ɸĕ——."

"As my grandfather is dangerous,
As my grandfather is dangerous,
When he brandishes his club,
Dangerous——."

When he had proceeded so far ɾaɸiⁿ-naⁿpajĭ stopped and refused to tell the rest, as it was too sacred.

This song is also sung by the keepers of the waɸixabe after the return of the warriors, when the ordeal of the wastégistú is tried. (See § 214.)

Though the keepers sometimes sing the songs four times, and the others then dance around four times, this is not always done so often. After the dance they enjoy the feast.

Presents are made by the giver of the feast to the keepers of the waɸixabe, who are thus persuaded to lend their sacred bags with the peculiar advantages or sacredness which they claim for them.

§ 197. The principal captains select the lieutenants, and assign to each of the other captains a company of about twenty warriors. Each of the minor captains camps with his own company, which has its own camp-fire apart from the other companies. But only the two principal captains select the scouts, police, etc.

When the fasting, etc., begins (see § 191), even the captains wear plumes in their hair.

When the party is very large, requiring many moccasins, and they intend going a long distance, a longer period than four days may be required for their preparations.

According to ɹaɸi$^{n}$-na$^{n}$pajĭ, the principal captains tie pieces of twisted grass around their wrists and ankles, and wear other pieces around their heads. This refers to the Thunder god. Two Crows says that he never did this.

§ 198. *Opening of the bags.*—When the principal captains wish to open their sacred bags, they assemble their followers in a circle, making them sit down. Any of the followers or servants (the terms are interchangeable) may be ordered to make an "ujéɿi" in the center of the circle, by pulling up the grass, then making a hole in the ground. Then the sacred bags are laid at the feet of the principal captains, each one of whom opens his own bag, holding the mouth of the bird towards the foe, even when some of the warriors are going to steal horses.

§ 199. *Policemen* or *Wanáce.*—These are selected after the party has left the village, sometimes during the next day or night, sometimes on the second day. The appointments are made by the principle captains. If the war-party be a small one, few policemen (from seven to ten) are appointed; but if it is a large party, many are appointed, perhaps twenty. There is never any fixed number; but circumstances always determine how many are required. For a small party, two wanáce-nuda$^{n}$'hañga, or captains of police, are appointed, to whom the principal captains say, "Wanáce ɸanúda$^{n}$hañ'ga taté," *You shall be captains of the police.* Each of these wanáce-nuda$^{n}$'hañga has several wanáce at his command. When any of the warriors are disobedient, or are disposed to lag behind the rest, the policemen hit them at the command of their own captains, the wanáce-nuda$^{n}$'hañga. When the wanáce see that the men are straggling, they cry, "Wa$^{n}$<! wa$^{n}$<!" On hearing this, the warriors say, "The policemen are calling"; so they run towards the main body.

§ 200. *Order of march for any war party.*—The scouts, or wada$^{n}$'be-ma, go from two to four miles in advance during the day. There are only two of these when the party is a small one; but a large party has four. These scouts are sent ahead as soon as they have eaten their breakfasts. They do not always go straight ahead. Should they come to a hill, they do not ascend, preferring to make a detour by going along a "skída," or high level forming an opening between two hills. If, when they reach there, they detect no signs of a foe, they continue on their way. Some

of the warriors may go out as scouts of their own accord, before requested to do so by the captains.

§ 201. When there is a large party, the two nuda$^{n}$'hañga-jiñ'ga, or minor captains, bearing the sacred bags, go about a hundred yards in advance of the others. Then march the captains, and after them follow the warriors and those who are the servants of the captains. Each captain has his servant, who carries his captain's baggage and rations, waits on him, brings him food and water, and makes his couch when they camp for the night. As the day advances and the warriors become tired, they drop behind. Then the captains order those near them to halt and sit down. If there are bearers of the waɕixabe, they are the first to take their seats at the command of the captains, who sit next to them. Then the nearest warriors are seated, and so on, as they come together. Those in the rear sit where they please. It is important for the party to keep together, for they might be exterminated if attacked when the men are scattered. As soon as those in the rear have overtaken the rest, all arise and resume the march.

The scouts having gone to the place designated, return to report, and two of the captains go ahead to meet them. Having reported whether they have seen traces of an enemy or of game, etc., they are relieved, and others are sent ahead in their places. This change of day scouts takes place as many times as the circumstances require. One of the men who bears the kettle on his back, acts as if he were a captain, addressing the warriors thus: "Ho, warriors! bring me water," or, "Ho, warriors! bring me some wood."

§ 202. *Songs.*—Sometimes when a man thinks that he will die fighting the enemy he sings different songs. One of these songs given by ɹaɕi$^{n}$-na$^{n}$pajĭ, was intended to infuriate the warriors. He said that it was the "Captive song," and was not regarded as sacred. Though he said that it was sung by one of the wanáce-nuda$^{n}$hañga, as he danced around the marching warriors, that is doubted by La Flèche and Two Crows, who said that one of the nuda$^{n}$hañga was not always singing and dancing around the others. The song, as sung, differs from the spoken words.

Na$^{n}$'-ku-ɕé ha$^{n}$'-ɕi$^{n}$-bi-go + (*i. e.*, Na$^{n}$'-ku-ɕĕ-a$^{n}$-ɕi$^{n}$'-i-gă)
Na$^{n}$'-ku-ɕé-ha$^{n}$'-ɕi$^{n}$-bi-go +
Hó, nú-da$^{n}$-hañ-gá, ʒa$^{n}$'-be tĕ
U-á-hi-ta-má-ji no + (*i. e.*, Uahita-majĭ áɕa u+!)
Nú-da$^{n}$-hañ-gá, na$^{n}$'-ku-ɕé-ha$^{n}$'-ɕi$^{n}$-bi-go +

It may be translated thus:

O make us quicken our steps!
O make us quicken our steps!
Ho, O war chief! When I see him
I shall have my heart's desire!
O war chief, make us quicken our steps!

One of the sacred songs which follows is from the ɹɔiwere language, and was sung by an Omaha captain. It is given as sung in the

Omaha notation of the Loiwere. The meaning of all the words cannot be given by the collector.

Ma$^{n}$'-ɸi$^{n}$ ɸe hé ga+we+ he-hé! (Ma$^{n}$-ɸi$^{n}$, for ma-nyi, *to walk.*)
Ma$^{n}$'-ɸi$^{n}$ ɸe hé ga+we+he-he!
Tcé-do na-há! (Tce-ʇo naha, *buffalo bull, he who is*, or, *The buffalo bull.*)
Ma$^{n}$'-ɸi$^{n}$ ɸe hé ga+we+ he-hé!

After singing this the captain addressed the men thus: "Ho, warriors! I have truly said that I shall have my heart's desire! Truly, warriors, they shall not detect me at all. I am now proceeding without any desire to save life. If I meet one of the foe I will not spare him."

§ 203. The Míɳasi watcí or *Coyote Dance.*—This was danced by the warriors before they retired for the night, to keep up their spirits. It was not danced every night, but only when thought necessary. The captains took no part in it. Some sang the dancing songs. All whitened themselves (sa$^{n}$kiɸaɸa). Each one carried a gourd rattle and a bow; he wore his quiver in his belt, and had his robe around him. They imitated the actions of the coyote, trotting, glancing around, etc.

§ 204. *Order of encamping.*—As soon as they stop to camp for the night four night scouts are sent out, one in advance, towards the country of the foe, one to the rear, and one on each side of the camp, each scout going for about a mile. Before they depart the captains say, "Ho, warriors! When you feel sleepy come back," referring to midnight. Then the scouts leave, and as soon as they reach their respective stations they lie down and watch for any signs of the enemy.

At the command of the nuda$^{n}$hañga-qɸexe the camp is formed in a circle, with the fire in the center. The warriors are told to go for wood and water, and the servants of the captains prepare couches for their respective masters by pulling grass, some of which they twist and tie up for pillows. Each servant does this for his own captain. When bad weather is threatening the lieutenants order the warriors to build a grass lodge. For tent poles they cut many long saplings of hard willow or of any other kind of wood, and stick them in the ground at acute angles, and about one foot apart, if wood is plentiful, and small sticks are interlaced. Then they cover this frame with grass. When wood is very scarce the saplings are placed further apart.

Unlike the Iowas, the Omahas do not open their sacred bags when they encamp for the night. All the bags are hung on two or three forked sticks, the waɸixabe-uɸúbaɳigɸe, which are about three feet high. These sticks are placed about five feet from the circle of warriors, close enough to be seized at once in case of an attack.

Should any scout detect danger he must give the cry of a coyote or míɳasi. By and by, when the scouts become sleepy, and there is no sign of danger, they return to the camp, and lie down with their comrades till nearly day. When it is time for roosters to crow, one of the captains exclaims, "Ho, warriors! rise ye and kindle a fire." Then all arise and dress in haste, and after they have eaten, the scouts are sent ahead, as on the preceding morning.

§ 205. *New names taken.*—When the warriors have been four nights on the way, excluding the night of departure from the village, the warriors generally take new names. But if any one likes his old name he can retain it. According to La Flèche and Two Crows, the ceremony is very simple. The captain tells all present that such a man has changed his name; then he addresses the Deity in the sky and the one under the ground: "Thou Deity on either side, hear it; hear ye that he has taken another name."

According to ɖaɸiⁿ-naⁿpajĭ, the warriors collect clothing and arrows, which they pile up in the center of the circle. As each man places his property on the pile, he says, "I, too, O war chief, abandon that name which is mine!" (This is probably addressed to the Thunder god.) Then one of the principal captains takes hold of the man by the shoulders, and leads him all around the circle, following the course of the sun. When he has finished the circumambulation (which is denied by La Flèche and Two Crows), the captain asks the man, "What name will you have, O warrior?" The man replies, "O war chief, I wish to have such and such a name," repeating the name he wishes to assume. The captain replies, "The warrior is speaking of having a very precious name!" Then one of the men is sent to act as crier, to announce the name to the various deities. The addresses to the deities vary in some particulars. The following was the proclamation of the Ponka, Cúdegáxe, when the chief, Nudaⁿ′-axa, received his present name: "He is truly speaking, as he sits, of abandoning his name, halloo! He is indeed speaking of having the name Cries-for-the-war-path, halloo! Ye big head-lands, I tell you and send it (my voice) to you that ye may hear it, halloo! Ye clumps of buffalo grass, I tell you and send it to you that ye may hear it, halloo! Ye big trees, I tell you and send it to you that ye may hear it, halloo! Ye birds of all kinds that walk and move on the ground, I tell you and send it to you that ye may hear it, halloo! Ye small animals of different sizes, that walk and move on the ground, I tell you and send it to you that ye may hear it, halloo! Thus have I sent to you to tell you, O ye animals! Right in the ranks of the foe will he kill a very swift man, and come back after holding him, halloo! He speaks of throwing away the name Najiⁿ′-tiɸe, and he has promised to take the name Nudaⁿ′-axa, halloo!" The original ɸegiha will be found on pages 372, 373 of Part 1, Vol. VI, "Contributions to N. A. Ethnology." According to the Omaha ɖaɸiⁿ-naⁿpajĭ, the following proclamation was made when he received his present name; but this is disputed by La Flèche and Two Crows:

"He is indeed speaking of abandoning his name! He is indeed speaking (as he stands) of having the name, He-fears-not-a-Pawnee-when-he-sees-him. Ye deities on either side (*i. e.*, darkness and the ground), I tell you and send it to you that you may hear it, halloo! O Thunder, even you who are moving in a bad humor, I tell you and send it to you that you may hear it, halloo! O ye big rocks that move, I tell you and

send it to you that ye may hear it, halloo! O ye big hills that move, I tell you and send it to you that ye may hear it, halloo! O ye big trees that move, I tell you and send it to you that ye may hear it, halloo! O all ye big worms that move (*i. e.*, O ye snakes that are in a bad humor, ye who move), I tell you and send it to you that ye may hear it, halloo! All ye small animals, I tell you and send it to you that ye may hear it, halloo! O ye large birds that move, I tell you and send it to you that you may hear it, halloo!" To this address was added some of the following promises, all of which were not used for the same person: "Watíɸ ídaⁿbadíqti wiⁿ′ naⁿ′pĕqti taⁿ′ wégaqɸ ‘íɸĕ taⁿ áɸa!—*He speaks as he stands of striking down one in the very midst of the ranks of the foe, who shall stand in great fear of him!*" "Watíɸ uhañ′geqti tĕ′di wiⁿ′ wégaqɸ ‘íɸĕ taⁿ áɸa!—*He is speaking of striking down one at the very end of the ranks of the foe.*" "Watíɸe ukaⁿ′ska ídaⁿbadiqti wiⁿ′ wégaqɸ ‘íɸĕ taⁿ áɸa!—*He is speaking of striking down one in the very middle of the enemy's ranks, having gone directly towards him.*" "Watíɸe uhañ′gadiqti wiⁿ t′éwakiɸ ‘íɸĕ taⁿ áɸa!—*He is speaking of slaying one at the very end of the enemy's ranks!*" "Gazaⁿ′adiqti wiⁿ ú ɸiñgé uɸaⁿ′ ‘íɸĕ taⁿ áɸa!—*He is speaking of taking hold of one without a wound right in the midst of the foe* (*i. e.*, when surrounded by them)!"

§ 206. *Behavior of those who stay at home.*—The old men who stay at home occasionally act as criers, day and night. They go among the lodges, and also to the bluffs, where they exhort the absent warriors, somewhat after this manner: "Do your best. You have gone traveling (*i. e.*, on the war path) because you are a man. You are walking over a land over which it is very desirable for one to walk. Lie (when you die) in whatever place you may wish to lie. Be sure to lie with your face towards the foe!" They do not keep this up all the time, nor do they always make such exhortations.

§ 207. The women, too, address the distant warriors. The following is a song referring to Hebadi-jaⁿ, of the ꓘaⁿze gens:

"Wa-na′-qɸiⁿ-ă! Á-ɸa-‘aⁿ′ ɸá-ɸiⁿ-cé-iⁿ-te
ꓶí-nu-há, ɸa-aⁿ′-ɸa caⁿ′ ɸá-ɸiⁿ-cé.
He-bá-di-jaⁿ′, Cá-aⁿ-jiñ′-ga kúɸĕ aɸiⁿ gí-ă!"

Hasten! What are you doing that you remain away so long?
Elder brother, now, at length, you have left him behind.
O Hebadi-jaⁿ! be returning quickly with a young Dakota!

La Flèche and Two Crows never heard this song; but they do not dispute its correctness. It was told the writer by ꓶaɸiⁿ-naⁿpajĭ.

§ 208. *Report of scouts.*—When the scouts return and report having found the enemy, stating also how they are encamped, if the party is a large one, the sacred bags are opened by the principal captains, with the mouth of each bag towards the enemy, as stated in § 198.

ꓶaɸiⁿ-naⁿpajĭ says that they then give the scalp-yell, and each one repeats what he has promised to do on meeting the enemy; but this is disputed by La Flèche and Two Crows.

§ 209. *Capture of horses.*—Two men who are active go to steal horses from the enemy. This departure is called "ʒí-gaqá aɸai," *they have gone to get the better of* (those in) *the lodges* (of the enemy), and is explained by "wama$^{n}$'ɸa$^{n}$ aɸaí," *they have gone to steal.* The two men may go together or may separate and try to steal horses at whatever places they can find any. Should these followers fail, two of the officers must make an attempt. These officers may be either the captains or the lieutenants. Sometimes a youth steals off from the warriors, and tries to capture a horse. The policemen try to prevent this, as the youth might alarm the foe. No matter who captures the horses, he must deliver them to the two principal captains. If many horses have been captured, the men take them to a safe distance, and then they are distributed among the members of the party. He who captured the horses is always the first to receive one from the captains. Each of the (principal) captains has his special followers, who are obliged to bring to him all the horses which they capture. And the captain, in like manner, shares his booty with his followers. Thus, when ɹaɸi$^{n}$-na$^{n}$pajĭ captured horses from the Dakotas, when he was one of the captains, he distributed eight horses among his own followers. (See p. 442, Part I, Vol. VI, Contributions to N. A. Ethnology.) When he recovered the horses from the enemy, the warriors thanked him, saying that on account of his act they would not be compelled to make their feet sore from walking home. When but few horses have been taken, only the elder men receive them; but when many have been captured, all of the party share alike.

§ 210. *Preparations for attacking the enemy.*—Before the attack is made, it is usually the custom for scouts to make a thorough survey of the enemy's camp. So, when Two Crows led his party against the Yanktons, in 1854, and had discovered the proximity of the foe, he first sent one of the lieutenants, ɹaɸi$^{n}$-na$^{n}$pajĭ, to count the lodges. On his return, another lieutenant, Sĭn'de-xa$^{n}$'xa$^{n}$, was sent by Two Crows, for the purpose of learning if the enemy were sleeping. The latter having reported, Two Crows himself, being one of the captains, went with Sĭnde-xa$^{n}$'xa$^{n}$ to make a final examination. Having ascertained the location of the sleepers, they returned to their party, and began the attack at midnight. When ɹahé-jiñga and Níkuɸíbɸa$^{n}$ had led a small party against the Pawnee Loups, they sent back a messenger to the Omaha camp, and when four scouts were sent from the camp, Wabaskaha, who was one of the small war party, deceived them, saying that the Cheyennes were in the camp near at hand. Then many of the Omahas joined the small party changing it into a nuda$^{n}$hi$^{n}$-ʒañga. This was after the death of the chief Black Bird, in the early part of this century. When the main body of the Omahas had joined the others, they proceeded without delay to surprise the camp of the Pawnees. Having arrived just at the outside of the village, they crawled towards it in perfect silence, going by twenties, each one holding the hand of the man next to him. The captain,

Nikuǵibǵa$^{n}$, or Gia$^{n}$habi, had a sacred bag, which he opened (*four times*, said Big Elk) with its mouth towards the foe, that the wind might waft the magic influence of the bag to the lodges, and make the sleepers forget their weapons and their warlike spirit (denied by La Flèche and Two Crows). He also had a war-club with an iron point, which he used as a sacred thing, waving it four times toward the foe. When they were very near the lodges, but while it was yet dark, one of the attacking party pulled his bow with all his might, sending an arrow very far. But the arrow could not be seen. They continued drawing nearer and nearer, exhorting one another, but speaking in whispers. At last it was daylight, which is the usual time for making the attack, as people are supposed to be sound asleep. Then Nikuǵibǵa$^{n}$ pulled his bow, and sent an arrow, which could be seen. He waved the sacred bag four times, and gave the attacking cry of the leader (the wa'i$^{n}$'ba$^{n}$) once, whereupon all of his party gave the scalp-yell (ugǵá'a'a), and began the fight by shooting at the lodges. (See § 193.)

Each combatant tries to find a shelter, from behind which he may fire at the enemy, though brave men now and then expose themselves to great danger when they rush towards the ranks of the enemy and try to capture a man, or to inflict a blow on him. Those who are the first to strike or touch a fallen enemy in the presence of his comrades, who are generally watching their opportunity to avenge his fall, are also regarded as very brave.

Protracted warfare, or fighting for several days in succession, has not been the Omaha custom.

§ 211. *Preparation for an attack on a single foe.*—In the story of I'cibáǰĭ of the ⌊e-sĭn'de gens, we read thus: "At length the warriors detected a man coming towards them. They told the war-chief, who said, 'Ho! Oh warriors, he is the one whom we seek. Let us kill him.' Then the warriors prepared themselves. They painted themselves with yellow earth and white clay. Icibaǰĭ picked up the pieces dropped by the others, and the war-chief made his back yellow for him, in imitation of the sparrow-hawk. Then the warriors pulled off their leggings and moccasins, which they gave to Icibaǰĭ to keep. When Icibaǰĭ, having gained the consent of his captain, had peeped over the bluff at the advancing man, he ran to meet him, having no weapon but his club. Having overtaken the man, he killed him with the club. And when the others took parts of the scalp, Icibaǰĭ did not take any of it."

§ 212. When one of the principal captains was killed, that always stopped the fight, even if he belonged to the side of the victors.

If any one heard that one of his kindred was killed or captured, he would try to go to him, and both generally perished together. When the Omahas were fleeing from the Dakotas, in a fight which occurred about A. D. 1846, some one told an old man that his son had been killed. "Ho!" said he, "I will stop running." So he turned around and went to the place where his son's body was. He rushed headlong

among the combatants, who were standing very thick, and at last perished with his son.

§ 213. *Return of the war-party.*—On the way home the booty is divided. ɖa¢iⁿ-naⁿpajĭ said that "They stop for the night at a point about two miles from the village," but La Flèche and Two Crows deny this, saying that the warriors come into the village when they please, as they are hungry and wish to see their wives and children.

If they have brought back scalps or horses, they set the grass afire. On seeing this the villagers say "Nudaⁿ′ ama′ agíi, eb¢e′gaⁿ. Usaí."—*I think that the warriors are coming back. They have set the grass afire.* ɖa¢iⁿ-naⁿpajĭ said that if they have brought scalps, they put some of the hair in the fire, and the smoke is black. But if they put a horse's tail in the fire, the smoke is very yellow.

La Flèche and Two Crows said that there is no difference in the meaning of the colors of the smoke, though déje jíde or red grass, sidúhi, and other kinds of grass, are set afire, and make different kinds of smoke.

When guns are fired it signifies that a foe has been killed. But when none are fired, and the grass is not set afire, it is a sign of an unsuccessful expedition.

As soon as the people hear the guns, they shout, "The warriors have come back!" Then the warriors ride back and forth, moving here and there among themselves in the distance. Then the old men proclaim through the village what each warrior has achieved, calling him by name—"This one has killed a foe!" "This one has broken off a head!" "This one would not allow the others to anticipate him in seizing one of the foe by the scalp-lock," etc.

§ 214. *Ordeal of the sacred bags.*—When the warriors have had a rest of about two days, they assemble for a dance, called the "Wéwatci," or Scalp-dance. Before the dance, however, the successful warriors receive the rewards or insignia of valor from the nudaⁿhañga who has the three wa¢íxabe ɻañ′ga or wastégistú. The three bags are placed in a row, and all the warriors stand in a row. Each warrior having selected the wa¢ixabe to which he intends speaking, he makes a present to it. Then the keeper of the wa¢ixabe addresses him, reminding him that Wakanda sees him, and that if he speaks falsely, he may not expect to stay much longer on the earth. Then the young man says, "Wiⁿ′ake. Wakan′da aká íbahaⁿi."—*I tell the truth. Wakanda knows it.* As he says this, he holds up his right hand towards the sky. Then he addresses the wa¢ixabe itself, as follows: "Hau, iⁿc'áge-ha! edádaⁿ uwíb¢a támiñke ¢aⁿ′ja, i¢áusi′ctaⁿ-májĭ uwíb¢a tá miñke."—*Ho, O venerable man! though I will tell you something, I will not lie when I tell it to you.* When he says this, he lets fall a small stick which has been cut beforehand. He is obliged to hold the stick up high when he drops it. Should the stick fall on the sacred bag and remain there, it is a sign that he has spoken the truth; but if it falls off, they believe that he has been guilty

of falsehood, and did not do in the fight that which he has claimed for himself.

*Rewards of bravery.*—When all the warriors have thus been tested, they are addressed by the holder of the waɸixabe. To one who was the first to take hold of a foe, he says, "ꓘáxe míɸagɸa$^{n'}$te hă," *You shall wear the crow in your belt.* Sometimes he adds, "Sábĕ ɸaꓘíckaxe te. ꓘáxe ájaja ɸaꓘíckaxe te hă."—*You shall blacken yourself. You shall make spots on yourself, resembling crows' dung.* This warrior must blacken his body, and then mark here and there spots with white clay.

ɹaɸi$^{n}$-na$^{n}$pajĭ said that the second who took hold of a foe had the following reward: He was allowed to blacken his body from the waist to the shoulders, and to rub white clay down the tops of his shoulders. To him was said, "Máca$^{n}$-skă, ʒáhi$^{n}$-wágɸa$^{n}$ áɸagɸa$^{n'}$ te hă."—*You shall stick in your hair white eagle feathers, and wear the deer's-tail head-dress.* La Flèche and Two Crows said that this man was allowed to wear the ʒahi$^{n}$-wagɸa$^{n}$ alone on his head, and to put the crow in his belt.

According to ɹaɸi$^{n}$-na$^{n}$pajĭ, the third warrior who caught hold of the foe blackened his body thus: On the arms, at the elbows, on the ribs, and hiusagi, he could make places as large as a hand (or, he could make one side of his body black—*sic*). To him was said, "ꓶáhi$^{n}$-wágɸa$^{n}$ máca$^{n}$ ɸiñgé áɸagɸa$^{n'}$ te hă," *You shall wear the* ʒahi$^{n}$-wagɸa$^{n}$ *without any feathers.* But La Flèche and Two Crows said that this man was told to wear the crow in his belt; and the fourth who took hold of the foe was told to wear the ʒahi$^{n}$-wagɸa$^{n}$ without any other decoration.

ɹaɸi$^{n}$-na$^{n}$pajĭ said that he who disemboweled a fallen enemy with a knife was permitted to stick a red feather in his hair. He blackened his body from the waist up to the shoulder, and over the shoulder, then down the back to the waist. He could redden his knife and dance as a grizzly bear. But Two Crows, who has attended the scalp-dance, never saw anything of this sort.

According to ɹaɸi$^{n}$-na$^{n}$pajĭ, he who killed a foe was rewarded in several ways. He could wear the ʒehuqɸabe[17] necklace, called the "gadádaje waci$^{n'}$, and was addressed thus: "Gadádaje waci$^{n'}$ na$^{n'}$ɸap'i$^{n}$ te hă," *You can wear the* ʒehuqɸabe *necklace.* "Ma$^{n'}$-uɸúbaski áiɸagáɸa te hă," *You shall carry the ramrod on your arm.* "ꓶáhi$^{n}$-wágɸa$^{n}$ sía$^{n}$ɸé áɸagɸa$^{n'}$ te hă," *You shall wear the* ʒahi$^{n}$-wagɸa$^{n}$ *alone in your hair.* (These were disputed by La Flèche and Two Crows.) "Ma$^{n'}$sa gasú jídeɸĕ na$^{n}$ɸap'i$^{n'}$ te hă," *You shall wear an arrow shaft, scraped and reddened, suspended from your neck.* (Confirmed by La Flèche and Two Crows.)

He who struck a foe with a hatchet, bow, etc., was allowed to redden it and carry it to the dance, if he wished.

Sometimes a warrior gave a gun, etc., to an old man, who went through the camp telling of the generosity of the giver.

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[17] The fat on the outside of the stomach of a buffalo or domestic cow.

All who had parts of scalps were told to wear ɟahiⁿ-wagɸaⁿ on their heads.

§ 215. *The scalp dance* (of the women).—One of the women had to carry the scalp around on a pole during the dance. This act is áiɸabáju.

When a man killed a foe with a knife, gun, hatchet, etc., it was taken by his wife, who held it as she danced. Such women dressed themselves in gay attire, decorated themselves with various ornaments, wore head-dresses of ɟejiⁿhiⁿde, painted their cheeks, and reddened the déugázaⁿ or parting of the hair of the head.

This scalp-dance is the women's dance; the men take no part but that of singing the dancing songs for the women and beating the drums. When any of the Omahas had been killed by the enemy, this dance could not be had; but when the Omahas were fortunate enough to kill some of the foe without losing any of their own party the men said, "Wéwatci añ'kiɸe taí," *Let them dance the scalp-dance.* Then the men went first with one, two, or three drums to a place bare of undergrowth, and began to beat the drums. By and by the women would hear it, and assemble. There was no feast and no invitations were made by criers. Any women and girls who wished to dance could do so. The only men allowed to sing the dancing songs for the women were those who had killed foes, or had taken hold of them.

The women did not dance in a circle, but "kiáqpaqpágɸa" (moving in and out among themselves) and "íkiɸíbɸaⁿ" (mixed, in disorder), as they pleased. Sometimes they danced all night till the next morning; sometimes they continued the dance for two or three days. This wewatci has not been danced by the Omaha women for about fourteen years. It is not considered a sacred dance, but one of rejoicing.

§ 216. The Heɸucka *dance* (of the men).—The corresponding dance for the men is the Heɸúcka.[18] The only members of the Heɸucka dancing society are such as have distinguished themselves in war, and boys whose fathers are chiefs. When Frank La Flèche was a boy he was admitted to the Heɸucka solely because his father was a chief.

"The first four to take hold of the foe were decorated with the ɟahiⁿ-wagɸaⁿ head-dress, the 'crow' in the belt, and garters of otter-skin.

"He who had killed a foe with a gun reddened the barrel for about nine inches or a foot from the muzzle, wore the 'crow,' and stuck several swan feathers around the muzzle. He also wore a feather in his hair.

"Those who struck some of the foe, but did not inflict fatal blows, made on their bodies the signs of blows; having blackened their hands, they put them here and there on their bodies, leaving black impressions. Sometimes they blackened the whole body, and over the black they made white hands, after rubbing white clay on their own hands. They wore feathers in their hair, as did all except the four who were the first to take hold of the foe.

[18] Known among the Kansas as the Ilucka, and among the Osages as the Iñɣɸŭⁿcka.

"He who had been wounded by the foe, without receiving a fatal blow, blackened his body, and put on a red spot and stripe to denote the wound and the dripping of the blood. He wore a red feather in his hair.

"Those who had brought back horses, wore lariats, "núsi-áqȼa" (over the left shoulder and under the right arm), and carried their whips on their arms.

"All these were promoted to the rank of wanáce or policemen, to act as such during the buffalo hunt." (*La Flèche* and *Two Crows.*)

"There were many singers. They had a drum, but no rattles of any sort. They danced as they moved around the fire-place, from left to right. This was always after a feast. They had no regular number of times for dancing around the circle.

"The man who first held a foe ranked as number one; the slayer came next; the second who held the foe ranked third; the third to hold the foe ranked fourth, and the fifth was he who cut off the head and threw it away.

"Sometimes the fourth man did this. Only the first, second, and third of these men were regarded as having gained great honors, and these three laded out the food at the feast.

"Only those who held or touched the foe made the impression of hands on their bodies.

"Those who struck living foes wore feathers erect in their hair, while those who hit dead enemies had to wear their feathers lying down." (*Frank La Flèche.*)

Mr. J. La Flèche gave the following as a very ancient song of this dance:

"Wakan'da aká aⁿȼiñ'ge te, ai égaⁿ,
Aⁿȼiñ'ge támiñke."

"Wakanda having said that I shall not be,
I shall not be."

In this song, "Aⁿȼiñ'ge ta'miñke" is equivalent to "At'é támiñke," *I shall die.* The idea is that the singer thought he would not die until Wakanda spoke the word, and then he must die. Till then he would be safe, no matter what dangers he encountered.

For the song in honor of the Ponka chief, Ubískă, see pp. 380, 381, Part I, Vol. VI., Contributions to N. A. Ethnology.

§ 217. *The He-watci.*—The concluding part of the Heȼucka was called the "Hé-watci." It was danced only by one man, a member of the Heȼucka society. After the feast, the head of a dog or deer was generally given to one of the guests, who ate it clean and laid it down after imitating, as he danced, some of his acts in battle. The man arose suddenly of his own accord, taking the head in both hands and holding it in front of him. When no head had been boiled he danced without one. The drum was beaten, but there were no songs. The dancer wore the "crow," and grasped a club or hatchet, which had been purposely placed in the middle of the circle. His acts resembled those of the four visitors when the Égi'aⁿ-watcigaxe was danced. (See §271.) Pointing in

various directions with his club or hatchet, with which he struck the ground each time, he said, "Níaci$^{n}$ga wi$^{n}$ gaé'a$^{n}$:" *I did thus to a man;* "Níaci$^{n}$ga wi$^{n}$ áq¢i," *I killed a man;* "Níaci$^{n}$ga wi$^{n}$ ub¢a$^{n}$," *I took hold of a man;* or some other expression. When he finished the He¢ucka dance was ended.

§ 218. *The Mandan dance with fallen friends.*—When the Omahas lost any of their number in a fight they had the Mandan dance on their homeward way, or after they reached home. If they had the bodies of their dead they placed the latter in the middle of a lodge, making them sit upright, as if alive and singing. And they made them hold rattles of deers' claws on their arms.

In the war story of ɹa¢i$^{n}$-na$^{n}$pajĭ, recorded in Part I, Vol. VI, Contributions to N. A. Ethnology, the narrator says: "All the people danced in groups, dancing the Mandan dance. I rode the horse which I had brought home. I painted my face and wore good clothing. I hit the drum: 'Ku+!' I said, 'Let Wáqa-náji$^{n}$ take that for himself,' referring to the horse. I presented the horse to one who was not my relation."

§ 219. When the war party return home, whether they have been successful or not, the captains invite the warriors to a feast. The warriors, in turn, invited the captains to a feast. There was no regular order; if the warriors boiled first they were the first to invite (the captains) to a feast.

§ 220. A battle may be ended either by the death of one of the principal captains or by sending a man with a sacred pipe towards the ranks of the enemy. The sacred pipe is a peace pipe, and is used instead of a flag of truce. (See Punishment of a murderer, § 309.)

§ 221. *Treatment of the wounded foes.*—If they fell into the power of the men of the victorious side they were killed and their bodies were cut in pieces, which were thrown towards the retreating foes, who cried with rage and mortification. Their treatment at the hand of the women has been described in § 184.

§ 222. *Treatment of captives.*—Captives were not slain by the Omahas and Ponkas. When peace was declared the captives were sent home, if they wished to go. If not they could remain where they were, and were treated as if they were members of the tribe; but they were not adopted by any one. When Gahíge-jiñ'ga, father of Wacúce, of the Iñke-sabĕ gens, was a small boy he was captured by the Ponkas as they were fighting with the Omahas, who were camped near their adversaries. The Omahas having overcome the Ponkas, the latter sent the aged Hañ'ga-ckáde, whom the Omahas admired, with a peace pipe, and, as an earnest of their intentions, they sent with him the boy whom they had captured that day. He was restored to his tribe, and peace was declared. (See International Law, § 306.)

§ 223. *Bravery.*—The following anecdotes were told by Mr. La Flèche as illustrating the bravery of his people:

An old man had a son who reached manhood, and went into a fight,

from which he returned wounded, but not dangerously so. The son asked his father saying, "Father, what thing is hard to endure?" He expected the father to say, "My child, for one to be wounded in battle is hard to endure." Had he said this, the son would have replied, "Yes, father; I shall live." The father suspected this, so he made a different reply: "Nothing, my child. The only thing hard to bear is to put on leggings again before they have been warmed by the fire." So the son became angry and said, "My father, I will die."

A certain old man had been very brave in his youth; he had gone many times on the war-path, and had killed many persons belonging to different tribes. His only children were two young men. To them he gave this advice: "Go on the war-path. It will be good for you to die when young. Do not run away. I should be ashamed if you were wounded in the back; but it would delight me to learn of your being wounded in the chest." By and by there was war with another tribe, and the two young men took part in it. Their party having been scared back, both young men were killed. When the men reached home some one said, "Old man, your sons were killed." "Yes," said he, "that is just what I desired. I will go to see them. Let them alone; I will attend to them." He found the eldest son wounded all along the back, but lying with his face towards home. Said he, "Wă! kí ga$^{n}$'¢aqti kéana. Gátĕ¸a úgaq¢e ¢aja$^{n}$' te, ehé ¢a$^{n}$'ctĭ."—*Why! he lies as if he felt a strong desire to reach home! I said heretofore that you were to lie facing that way.* So taking hold of his arms, he threw the body in the other direction, with the face towards the enemy. He found the younger son wounded in the chest, and lying with his face toward the foe. "Ho! this is my own son. He obeyed me!" And the father kissed him.

§ 224. *Grades of merit* or *bravery*, Úwahéhajĭ-má, were of two sorts. To the first class belonged such as had given to the poor on many occasions, and had invited guests to many feasts, being celebrated for the latter as "wéku-cta$^{n}$." To the second class belonged those, who, besides having done these things many times, had killed several of the foe and had brought home many horses. In connection with war customs, see Property (Chapter XII), and Regulative Industries (Chapter XI).

Another protective industry is the practice of medicine. (See Dancing Societies, Chapter X.)

## CHAPTER X.

### AMUSEMENTS AND CORPORATIONS.

§ 225. *Riddles*, Wáɬade.—"Níaciⁿga wiⁿ ní kĕ'di hí égaⁿ, daⁿ'be ꞑĺ, xagé gí. Edádaⁿ ă?—*A person having gone to the water, and looked at it is coming back weeping. What is that?*" The answer is, "ɸéxé amé. Ní kĕ íɬijai ꞑĺ, aɬiⁿ' agíi ꞑĺ, ga'ĕ''ĕ. É xagé, ai."—*It is a kettle. When it is dipped into the water, and one is bringing it back, it is dripping. That, they say, is weeping.*

ꟻahé ꞑañgáqti wiⁿ ĕdedíɬiⁿ ꞑĺ'jĺ, qɬabé ábaéqtiaⁿ! Cañ'ge ĕdedíama; hiⁿ sábĕ, jíde ctĺ, skă ctĺ. Indádaⁿ ă?"—*There is a mountain that is covered with trees. Horses are moving there; some have black hair, some red, and some white. What is it?* The answer is, "A person's head is the mountain; the hairs are trees, and lice are the horses."

"Gawéxe wiⁿ ĕdedíɬaⁿ. Indádaⁿ ă?"—*There is a place cut up by gulleys. What is it?* Answer: Wa'ujiñga índé hă, *An old woman's face.* (It is furrowed with wrinkles.)

§ 226. *Proverbs*, Wíuɬa.—Sometimes they say of an obstinate man, "Waníꞑa égaⁿ ábaⁿ," *He is like an animal*, meaning that he is "naxídeɬiñgé." Another ancient comparison is this: "Jé égaⁿ ábaⁿ. Wanaⁿ'pajĺ ábaⁿ."—*He is like the membrum virile! He fears the sight of nothing!* This refers to a bad man, who fears not to commit a wrong, but pushes ahead, in spite of opposition, or, as the Omahas say, "áꞑidatcíje," regardless of the consequences to others or to himself.

A proverb about the "Wanaxe piăjĺ," the bad spirit, is a modern one, introduced after coming in contact with the white men.

Ictínikeqtiaⁿ'i, *He is like Ictinike; i. e.*, he is very cunning. Miꞑá da núꞑagiɬai, *The raccoon wet his head.* This refers to one who talks softly when he tries to tempt another.

§ 227. *Puns.*—Two youths accompanied their mother's brother when he hunted game. Having killed a deer, the two young men proceeded to cut it up, while the uncle looked on. He made this observation to them: "Sábĕ aⁿɬaⁿ'da ɬaⁿ'ja, gaⁿ'adi íɬisábe hă."—Though I was born *black* (sabĕ), now you *suffer* (iɬisabe).

### GAMES.

§ 228. *Plumstone shooting*, ꞑaⁿ'-si kíde.—This game was thus described by Dougherty. "Five plumstones are provided, three of which are marked on one side only with a greater or smaller number of black

dots or lines, and two of them are marked on both sides; they are, however, sometimes made of bone of a rounded or flattened form, somewhat like an orbicular button-mold, the dots in this case being impressed. A wide dish and a certain number of small sticks by the way of counters are also provided. Any number of persons may play this game, and agreeably to the number engaged in it, is the quantity of sticks or counters. The plumstones or bones are placed in a dish, and a throw is made by simply jolting the vessel against the ground to make the seeds or bones rebound, and they are counted as they lie when they fall. The party plays around for the first throw. Whoever gains all the sticks in the course of the game wins the stake. The throws succeed each other with so much rapidity that we vainly endeavored to observe their laws of computation, which it was the sole business of an assistant to attend to."

The seeds used in this game are called ɣa$^{n'}$-si gĕ. Their number varies. Among the Ponkas and Omahas, only five are used, while the Otos play with six. Sometimes four are marked alike, and the fifth is black or white (unmarked). Generally three are black on one side, and white or unmarked on the other, while two have each a star on one side and a moon on the other.

The players must always be of the same sex and class; that is, men must play with men, youths with youths, and women with women.

There must always be an even number of players, not more than two on each side. There are about twenty sticks used as counters. These are made of deska or of some other grass.

The seed are put in a bowl, which is hit against a pillow, and not on the bare ground, lest it should break the bowl.

When three seeds show black, and two have the moon on the upper side, it is a winning throw; but when one is white, one black, a third black (or white), the fourth showing a moon, and the fifth a star, it is a losing throw. The game is played for small stakes, such as rings and necklaces.

§ 229. Banañ'ge-kíde, *Shooting at the* banañge or *rolling wheel.*—This is played by two men. Each one has in his hand two sticks about as thick as one's little finger, which are connected in the middle by a thong not over four inches in length. The sticks measure about three feet and a half in length. Those of one player are red, and those of the other are black. The wheel which is rolled is about two feet and a half in diameter, its rim is half an inch thick, and it extends about an inch from the circumference towards the center. On this side of the rim that measures an inch are four figures. The first is called "Máxu," *Marked with a knife*, or "Mágɕeze," *Out in stripes with a knife.* The second is "Sábĕ tĕ," *The black one.* The third is "Ákiɕítĕ," *Crossing each other.* The fourth is "Jiñgá tcĕ," *The little one*, or "Máxu jiñgá tcĕ," *The little one marked with a knife.* The players agree which one

of the figures shall be "waqúbe" for the game; that is, what card-players call "trumps."

The wheel is pushed and caused to roll along, and when it has almost stopped each man hits gently at it to make it fall on the sticks. Should the sticks fall on the top of the wheel, it does not count. When a player succeeds in lodging his sticks in such a way that he touches the waqube, he wins many sticks, or arrows. When figures are touched by one or both of his sticks, he calls out the number. When any two of the figures have been touched, he says, "Na$^{n}$ba$^{n}$'a-ú hă," *I have wounded it twice.* If three figures have been hit, he says, "ɸábɸi$^{n}$ a-ú hă," *I have wounded three.* Twenty arrows or sticks count as a blanket, twenty-five as a gun, and one hundred as a horse.

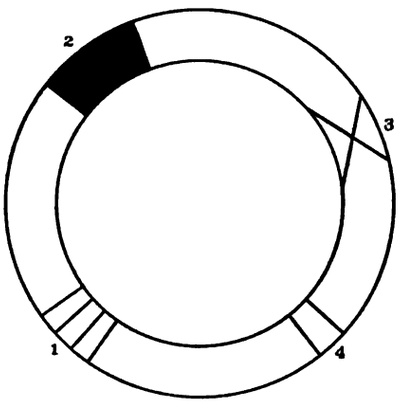

FIG. 32.—The banañge.

§ 230. Ⱡabé-gasi, *Men's game of ball.*—This is played by the Omahas and Ponkas with a single ball. There are thirty, forty, or fifty men on each side, and each one is armed with a curved stick about two feet long. The players strip off all clothing except their breech-cloths. At each end of the play-ground are two posts from 12 to 15 feet apart. The play-ground is from 300 to 400 yards in length. When the players on the opposite side see that the ball is liable to reach A they try to knock it aside, either towards B or C, as their opponents would win if the ball passed between the posts at A. On the other hand, if the party represented by A see that the ball is in danger of passing between the posts at D they try to divert it, either towards E or F.

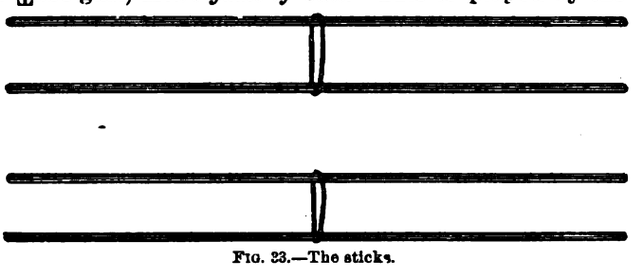
FIG. 33.—The sticks.

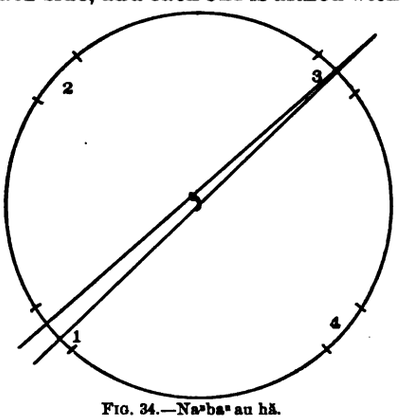

FIG. 34.—Na$^{n}$ba$^{n}$ au hă.

The stakes may be leggings, robes, arrows, necklaces, etc. All are lost by the losing side, and are distributed by the winners in equal shares. One of the elder men is requested to make the distribution. Two small boys, about twelve years old, stand at the posts A, and two others are at D. One boy at each end tries to send the ball between the posts, but the other one attempts to send it in the opposite direction. These boys are called uhé ginájiⁿ.

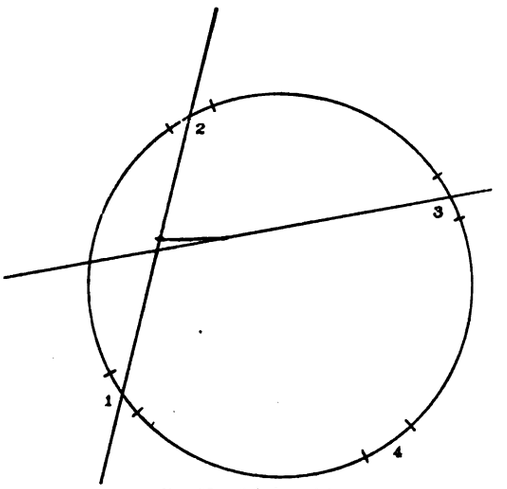

FIG. 35.—ɥabɕiⁿ au hă.

The game used to be played in three ways: (1.) Phratry against phratry. Then one of the players was not blindfolded. (2.) Village against village. The Omahas had three villages after 1855. Bi-kú de was Gahige's village, where most of the people were. Wiⁿ-dja'-ge was Standing Hawk's village, near the Mission. Jaⁿ-ɕa'-te was Sanssouci's village, near Decatur. Frank La Flèche remembers one occasion when Wiⁿ-djage challenged Bikude to play ʒabe-gasi, and the former won. (3.) When the game was played neither by phratries nor by villages, sides were chosen thus: A player was blindfolded, and the sticks were placed before him in one pile, each stick having a special mark by which its owner could be identified. The blindfolded man then took up two sticks at a time, one in each hand, and, after crossing hands, he laid the sticks in separate piles. The owners of the sticks in one pile formed a side for the game. The corresponding women's game is Wabaɔnade.

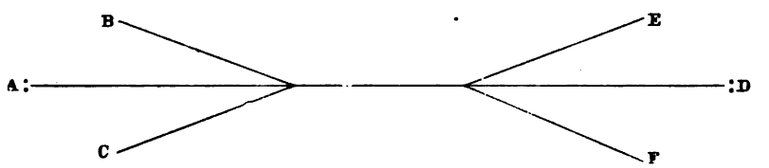

FIG. 36.—Diagram of the play-ground

§ 231. ɹáɕiⁿ-jáhe, or *Stick and ring.*—ɹáɕiⁿ-jáhe is a game played by two men. At each end of the play-ground, there are two "búʒa," or rounded heaps of earth.

A ring of rope or hide, the waɕígije, is rolled along the ground, and each player tries to dart a stick through it as it goes. He runs very swiftly after the hoop, and thrusts the stick with considerable force.

If the hoop turns aside as it rolls it is not so difficult to thrust a stick through it.

The stick (A) is about 4 feet long. D is the end that is thrust at the hoop. BB are the gaqa or forked ends for catching at the hoop. CC

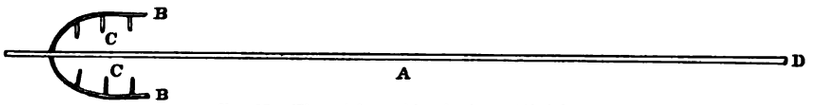


FIG. 37.—The stick used in playing ɖáɕiⁿ-jahe.

are made of ha násage, wéabasta násage íkaⁿtaⁿ, *stiff hide, fastened to the forked ends with stiff* "weabasta," or *material used for soles of moccasins.* These ha nasage often serve to prevent the escape of the hoop from the forked ends. Sometimes these ends alone catch or hook the hoop. Sometimes the end D is thrust through it. When both sticks catch the hoop neither one wins.

FIG. 38.—The waɕigije.

The stakes are eagle feathers, robes, blankets, arrows, earrings, necklaces, &c.

§ 232. Wabáɔnade, *the women's game of ball.*—Two balls of hide are filled with earth, grass, or fur, and then joined by a cord. At each end of the play-ground are two "gabázu" or hills of earth, blankets, &c., that are from 12 to 15 feet apart. Each pair of hills may be regarded as the "home" or "base" of one of the contending parties, and it is the aim of the members of each party to throw the balls between their pair of hills, as that would win the game.

Two small girls, about twelve years old, stand at each end of the play-ground and act as uhe ginajiⁿ for the women, as boys do for the men in qabe-gasi.

Each player has a webaɔnade, a very small stick of hard or red willow, about 5 feet long, and with this she tries to pick up the balls by thrusting the end of the stick under the cord. Whoever succeeds in picking them up hurls them into the air, as in playing with grace hoops. The women can throw these balls very far. Whoever catches the cord on her stick in spite of the efforts of her opponents, tries to throw it still further, and closer to her "home." The stakes are buffalo hides, small dishes or bowls, women's necklaces, awls, &c. The bases are from 300 to 400 yards apart. The corresponding men's game is Ɉabe-gasi.

§ 233. Jaⁿ-ɕáwa, *Stick counting,* is played by any number of persons with sticks made of déska or sidúhi. These sticks are all placed in a heap, and then the players in succession take up some of them in their hands. The sticks are not counted till they have been taken up, and then he who has the lowest odd number always wins. Thus, if one player had five, another three, and a third only one the last must be the victor. The highest number that any one can have is nine. If ten or more sticks have been taken, those above nine do not count. With the ex-

ception of horses, anything may be staked which is played for in banañge-kide.

§ 234. Ma$^{n}$-gádaze is a game unknown among the Omahas, but practiced among the Ponkas, who have learned it from the Dakotas. It is played by two men. Each one holds a bow upright in his left hand with one end touching the ground and the bow-string towards a heap of arrows. In the other hand he holds an arrow, which he strikes against the bow-string, which rebounds as he lets the arrow go. The latter flies suddenly towards the heap of arrows and goes among them. The player aims to have the feather on his arrow touch that on some other arrow which is in the heap. In that case he wins as many arrows as the feather or web has touched; but if the sinew on his arrow touches another arrow it wins not only that one but all in the heap.

§ 235. I$^{n\prime}$-uti$^{n\prime}$, *Hitting the stone*, is a game played at night. Sometimes there are twenty, thirty, or forty players on each side. Four moccasins are placed in a row, and a member of one party covers them, putting in one of them some small object that can be easily concealed. Then he says "Come! hit the moccasin in which you think it is." Then one of the opposite side is chosen to hit the moccasin. He arises, examines all, and hits one. Should it be empty, they say, "ɸiñgéĕ hă," *It is wanting.*" He throws it far aside and forfeits his stakes. Three moccasins remain for the rest of his friends to try. Should one of them hit the right one (uska$^{n\prime}$ska$^{n}$ uti$^{n\prime}$, *or* uka$^{n\prime}$ska uti$^{n\prime}$), he wins the stakes, and his side has the privilege of hiding the object in the moccasin. He who hits the right moccasin can hit again and again till he misses. Sometimes it is determined to change the rule for winning, and then the guesser aims to avoid the right moccasin the first time, but to hit it when he makes the second trial. Should he hit the right one the first time he loses his stakes. If he hits the right one when he hits the second moccasin, he wins, and his side has the right to hide the object. They play till one side or the other has won all the sticks or stakes. Sometimes there are players who win back what they have lost. He who takes the right moccasin wins four sticks, or any other number which may be fixed upon by previous agreement.

Eight sticks win a blanket; four win leggings; one hundred sticks, a full-grown horse; sixty sticks, a colt; ten sticks, a gun; one, an arrow; four, a knife or a pound of tobacco; two, half a pound of tobacco. Buffalo robes (meha), otter skins, and beaver skins are each equal to eight sticks. Sometimes they stake moccasins.

When one player wins all his party yell. The men of each party sit in a row, facing their opponents, and the moccasins are placed between them.

§ 236. *Shooting arrows at a mark* is called "Ma$^{n}$ kíde." The mark (nacábegɸe tĕ) may be placed at any distance from the contestants. There must be an even number of persons on each side. Men play with men and boys with boys. Arrows are staked. Sometimes when an ar-

row hits squarely at the mark it wins eight arrows or perhaps ten, according to previous agreement. When no arrow hits the mark squarely and one touches it, that arrow wins. And if there is neither an arrow that hits the mark squarely nor one that barely touches it, then the nearest arrow wins. Should there be no arrow that has gone nearly to the mark, but one that has gone a little beyond it and descended, that one wins. Whichever one is nearest the mark always wins. If there are two arrows equidistant from the mark which belong to opposite sides in the game neither one wins; but if the equidistant arrows are on the same side both win. Sometimes they say, "Let us finish the game whenever any one hits the mark squarely." Then he who thus hits the mark wins all the arrows staked.

§ 237. *Shooting at a moccasin.*—Hi$^{n}$be kide is a boy's game. An arrow is stuck in the ground and a moccasin is fastened to it. Each boy rides swiftly by and shoots at the moccasin. The game resembles the preceding one.

§ 238. Ma$^{n}$-múqpe, *The game of dislodging arrows*, is common to the Omahas, Ponkas, Iowas, Otos, and Missouris. Arrows are shot up into a tree till they lodge among the branches; then the players shoot up and try to dislodge them. Whoever can bring down an arrow wins it. There are no sides or opposing parties. Any number of boys can play. The game has become obsolete among the Omahas as there are no arrows now in use.

§ 239. Ma$^{n}$ɸi$^{n'}$-bagí, Wahí-gasnug'-iɸe (Omaha names), or Ma$^{n}$-íbagí (Ponka name) is a game played by an even number of boys. The tall sticks of the red willow are held in the hand, and, when thrown towards the ground so as to strike it at an acute angle, they glance off, and are carried by the wind into the air for some distance. Whichever one can throw his stick the furthest wins the game; but nothing is staked.

§ 240. Man'dĕ gasnug'-iɸe is a game similar to Ma$^{n}$ɸi$^{n}$-bagi, but bows are used instead of the red willow sticks and arrows are staked, there being an even number of players on each side. Each bow is unstrung, one end being nearly straight, the other end, which is to hit the ground, being slightly curved. When snow is on the ground the bows glide very far. Sometimes the bow rebounds and goes into the air, then alights and glides still further. The prize for each winning bow is arranged before each game. If the number be two arrows for each and three bows win, six arrows are forfeited by the losing side; if four bows win eight arrows are lost. If three arrows be the prize for each, when two bows win, six arrows are forfeited; when three win, nine arrows; and so on.

§ 241. I$^{n'}$-ti$^{n}$ búqa, a boy's game among the Omahas, is played in winter. It is played by two, three, or four small boys, each one having a stick, not over a yard long, shaped like the figure. The stakes are necklaces and ear-rings; or, if they have no stakes they agree to hit once on the

head the boy whose stick goes the shortest distance. The sticks are thrown as in Ma$^{n}$¢i$^{n}$-bagi.

§ 242. *Diving.*—Boys dive and see who can go the farthest under water. Some put grass in their mouths previous to diving; and when they

FIG. 38.—The stick used in playing I$^{s}$ti$^{s}$-bu$\eta$a.

get under water they blow through the grass, causing bubbles to rise to the surface and mark their course. He who goes the shortest distance can be struck by the winner with the robe of the latter.

§ 243. *Children's games.*—Children play in the mud, making lodges, etc.; hence the verb "$\eta$i'-gaxe," *to make* (mud) *lodges*, to play as children do. The girls used to make dolls of sticks, and place them in small u¢uhe. Now, some of them make rag dolls.

Children strike one another "last," saying, "Gatca$^{n}$'," *i. e.*, "So far."

$\llcorner$aha¢ija is played by two persons. A's left hand is at the bottom, the skin on its back is pinched by B's left hand, which, in turn, is pinched by A's right, and that by B's right. After saying "$\llcorner$aha¢ija" twice as they raise and lower the hands, they release them and nit at each other. The Kansas call the game Taleska. These two customs were observed among the Ponka children.

§ 244. *Games with playing cards.*—Since coming in contact with our race the Omahas have learned to play several games with cards; and a few can play checkers and backgammon, though they are hardly familiar with our language.

Dougherty says, "Various are the games which they practice, of which is one called *Matrimony*, but others are peculiar to themselves. The following is one to which they seem to be particularly devoted:

"The players seat themselves around a bison robe, spread on the ground, and each individual deposits in the middle the articles which he intends to stake, such as vermilion, beads, knives, blankets, etc., without any attention to the circumstance of equalizing its value with the deposits made by his companions. Four small sticks are then laid upon the robe and the cards are shuffled, cut, and two are given to each player, after which the trump is turned. The hands are then played, and whoever gains two tricks takes one of the sticks. If two persons make each a trick, they play together until one loses his trick, when the other takes a stick. The cards are again dealt and the process is continued until all the sticks are taken. If four persons have each a stick they continue to play to the exclusion of the unsuccessful gamesters. When a player wins two sticks, four cards are dealt to him that he may take his choice of them. If a player wins three sticks, six cards are dealt to him, and should he take the fourth stick he wins the stakes."

§ 245. *Musicians.*—These included the musicians for special occasions, as the Qu$\chi$a for the service of the keepers of the sacred tents of the

Hañga (see Hunting customs, § 143), the singers for the Hede-watci, who were Iñke-sabĕ men, and the musicians for the dancing societies, etc.

## CORPORATIONS.

### FEASTING SOCIETIES.

§ 246. *Feasting societies* or Úkikunéɸĕ (called Ukíkuneɸĕ by the Ponkas) were of three kinds; that for the men, that for the young men, and one for youths in their teens. No business was transacted, and there was neither singing nor dancing as an essential part of the proceedings. They were merely social gatherings, intended chiefly for the purpose of feasting, and they were fostered by the state, as they tended to bind together as friends all who were present as guests.

Joseph La Flèche used to be a member of the society of the married men and aged men. When he did not go to the feast he could send his son, Frank; and other men were allowed to send their sons as proxies. This society is now extinct. The giver of the feast used to place in the middle of the lodge a large wooden bowl, which was empty. Beside it was laid a very red spoon, made of buffalo horn. The bowl and spoon were not used by any of the guests.

The society of the young men, which became extinct about A. D. 1879, was called, "Hi$^{n}$be hi$^{n}$ t'a$^{n}$, *Hairy Moccasins.*" To this belonged Hidaha, of the Elk gens, Huta$^{n}$ta$^{n}$, of the Ictasanda, and many others. They invited any one whom they wished to join their society. A pipe was smoked whenever they assembled.

There was a society for youths from seventeen to nineteen years of age, but its name cannot be recalled by Frank La Flèche. (See §§ 18, 111, 130.)

### DANCING SOCIETIES.

§ 247. *The dancing societies* of the Omahas and Ponkas may be divided into the following classes: 1. Those which are "waqube," or sacred, including those connected with the practice of medicine. 2. Those that are "úwacúce-aɻáɸica$^{n}$," or connected with bravery and war. 3. Those that are "újawa-ɻáɸica$^{n}$," or merely for social pleasure. They admit of another classification, *i. e.*, 1. Those of native origin; and, 2, such as have been introduced or purchased from other tribes.

§ 248. *The Wacicka dance.*—The Wacícka aɸi$^{n}$-ma or Wacícka aɸi$^{n}$-watcígaxe is the name of the principal society. The Ponca name for it is "Wacúckanyi." This society appears to exist under different names among many tribes besides the Omahas, including the Winnebagos, Dakotas, and Odjibwe or Chippewas.

The writer has received conflicting accounts of the character of this dance. Daɸi$^{n}$-na$^{n}$paji spoke of it as one that was "waspe," *well-behaved.*

Mr. J. La Flèche and Two Crows used the following expressions with reference to it: "Úꞁiju gáxai," *it tended to pride;* "úgactañka gáxai," *it tended to temptation;* "úma$^{n}$¢a$^{n}$ gáxai," *it tended to theft;* "úmi$^{n}$-¢íg¢a$^{n}$ gaxai," *it tended to concupiscence;* "íqta-hna$^{n}$i," *they used to abuse persons;* "watcí," *cum aliquibus coiverunt.* The dancers used to dress so as to attract those of the opposite sex. The leaders or "í¢ig¢a$^{n}$" of the dance are G¢eda$^{n}$-naji$^{n}$ and ɖedegahi. The other members whose names are remembered by Two Crows and others are Wacka$^{n}$-ma$^{n}$¢i$^{n}$, Duba-ma$^{n}$¢i$^{n}$, Maja$^{n}$-kide, Cañge-skă, Jiñga-gahige, Ha$^{n}$-akipa, the wives of G¢eda$^{n}$naji$^{n}$, ɖede-gahi, and Wacka$^{n}$-ma$^{n}$¢i$^{n}$, ꞁe-baha's mother, and ꞁa$^{n}$ze-hañga's mother's sister. "Besides these are Muxa-naji$^{n}$, Jiñga-gahige's mother, Wacka$^{n}$-ma$^{n}$¢i$^{n}$'s son, Uma$^{n}$ha$^{n}$-ta$^{n}$wañg¢a$^{n}$, and many others." (*Frank La Flèche.*) The full number is nineteen. All the chiefs can belong to this society, and their younger brothers, wives, eldest daughters, and sisters' sons are eligible. Waha$^{n}$-¢iñge's larger wife, A$^{n}$pa$^{n}$-ʒañga's sister, used to be a member.

Not over five can carry otter-skin bags in the dance. Four of these are Duba-ma$^{n}$¢i$^{n}$, Jiñga-gahige, Cañge-skă, and Maja$^{n}$-kide. G¢eda$^{n}$-naji$^{n}$ is one of the two that can carry bags made of the skins of the siñga or flying-squirrels. Ha$^{n}$-akipa carries a bag made of the skin of a miꞁa-skă or "white raccoon." This is a modern addition. ɖa¢i$^{n}$-na$^{n}$pajĭ said that some have bags of the skin of the máza$^{n}$he, an animal resembling an otter; it is covered with black and reddish-yellow hair; its tail is bushy, and the hair is thick. J. La Flèche and Two Crows said that this kind of bag was not used by the Omahas. The parents of G¢eda$^{n}$-naji$^{n}$ (ꞁe-sa$^{n}$ and wife) carried a bag of black bear skin, but the son did not inherit it.

If they cannot have the regular kind of bags, some make bags of the skins of muskrats, or of any other animal which they can obtain.

All who have no skin bags carry fans of eagles' wings. All the bags are called "Hi-úgaqíxe," a term meaning "A skin with the teeth of the animal attached," and they are used as nini-ujiha, or tobacco pouches. The noses of all the animals (*i. e.*, those on the bags) were painted blue. Of the otter-skin bags about two had each a red feather placed cross-wise in the mouth of the animal.

§ 249. This dance is held in the spring of the year, beginning on a good day, when the grass is about six inches high. After an intermission of a few days they may have the dance again, if they wish; then, after a similar intermission, they may repeat it, and so on.

Before holding the dance one of the members, an old man, says to the leaders, "Do consider the subject; I will boil (for the feast)." They reply, "Yes, we will have it; you can boil." Then the members must borrow two drums, four gourd rattles, and two pillows. These articles must always be borrowed, as it would be wrong for the members to make or furnish them. Four persons undertake the boiling for the feast. Some brave men are selected to act as "quꞁa," part of whom, however,

are members of the society. Two are appointed to beat the drums, and four to beat the rattles on the pillows. These six performers are not members of the society.

§ 250. When one wishes to join the society he must proceed as follows: During the day the candidate boils food for a feast, to which he invites all the members of the society. About twilight they arrive, and having partaken of the feast they receive presents from the candidate, who asks them to admit him to their society. If they agree to admit him a feast is appointed for the next day in connection with the dance, when he will be initiated. Before the ceremony, however, the chiefs confer with one another, saying, "Wí abɸiⁿ′ támiñke. Níkaciⁿ′ga wágazu′gaⁿ, abɸiⁿ′ támiñke. Uɸúkaⁿpi tégaⁿ abɸiⁿ′ támiñke."—*I will have him. I will have him, as he is an honest man. I will have him, as he will be a fine looking person.*

§ 251. *Dress and ornaments of the dancers.*—Two Crows says that they used to wear deer-skin leggings. He says that there is no uniform dress for members of either sex. ɟaɸiⁿ-naⁿpajĭ gave the following: The men wear red leggings, of which each leg comes down over the moccasin in a point. Ribbon-work in two parts that cross over the moccasins shakes when the wearer dances. Two kinds of garters are worn together; one kind is of otter-skin, the other of bead-work and ɻejiⁿhiⁿde.[19] This ɻejiⁿhiⁿde part is fastened over the legging-flap on the outer side of each leg, and is "zázade" (extending apart like the sticks of a fan) and dangling. The flaps of the leggings, which are as wide as a hand, contain ribbon-work generally from the knee up, and sometimes the whole length of the leggings. When a member wears no shirt he may ornament his body with a dozen "waɸígɸeze," or convoluted lines. These are red, six in front and six on the back; of those in front, two are at the waist, two higher up on the chest, and two on the arm; and of those on the back two are near the nape of the neck, two lower down, and two just above the waist. A red stripe about a finger wide is put on the face, extending from each side of the mouth to the jaw, and similar stripes are drawn down on the sides of the nose. ɟeji$^{n}$hi$^{n}$de head-dresses are worn, and some have deer's tail head-dresses on their heads, surmounted by very white feathers, which are waving slowly as the dancers move. Two Crows says that they now turn down the flaps or hiⁿbédiha of the moccasins.

The women's attire consists of a gay calico body or sacque, ornamented with two rows of small pieces of silver as large as copper cents, extending all around the neck of the garment; leggings with an abundance of ribbon embroidered on the flaps; short garters of ɻejiⁿhiⁿde and bead-work; moccasins dyed black and ornamented with porcupine work, and a red or black blanket.

ɟé-ugácke úiⁿ, ear-bobs, are worn.

[19] Yarn of various colors intervoven.

The parting of the hair is reddened, and a narrow red stripe is made from the temple to the jaw.

Two Crows says that there are different styles of putting the paint on the eyes, etc., with the exception of the two methods given above, which never vary.

§ 252. The dance may take place out of doors, or else in an earth-lodge. It is started by the leaders, who begin the song, which is then taken up by the singers. The dancers form a circle, and around this they dance, following the course of the sun, according to ɖaɸiⁿ-naⁿ-pajĭ. There are different steps in the dance, and each person keeps time with the beating of the drums.

ɖaɸiⁿ-naⁿpajĭ says that the wacicka is as thick as a pencil, and is about a half an inch long. It is white. It is generally shot at the candidate by a member who is not one of his kindred, though the kinsman may do the shooting. It is generally given "waɸíɔnajĭ," *invisibly*, being shot from the mouth of the possessor into that of the candidate, lodging in his throat near the Adam's apple, and knocking him down. Then the candidate staggers and coughs, "Ha! ha!" (whispered). He hits himself on the back of his head and dislodges the wacicka into his hand, where it lies white. A sacred bag is also given to the candidate. The wacicka is always kept in the mouth of the otter (that is, in the hi-ugaqixe), except when the owner wishes to shoot it from his mouth (at a candidate?), according to ɖaɸiⁿ-naⁿpajĭ. But J. La Flèche and Two Crows say that the wacicka is spit into the mouth of an otter when they wish to use it in the dance.

A few of those carrying bags imitate the cry of the otter or that of the flying squirrel: "Tcu! tcu! tcu! tcu! tcu!" (in thirty-second notes). Each one has a small piece of wood that has been hollowed with a knife, and feathers that have been cut thin have been fastened on the wood, making a whistle which causes the imitation of the cry of those animals. On each bag some bells are put on the tail of the animal, and porcupine work is around the legs. The dancer holds the head in one hand and the tail in the other. It is aimed at the person to be shot at. None are thus shot at but members and candidates.

§ 253. *Order of shooting.*—All stand in a circle. Then four of their number are placed in the middle, standing in a row. They who do the shooting remain in the circle, and each one of them shoots at one of the four in the middle. When the latter or the second four have "gaɔnúde" (*i. e.*, have made the wacicka come out of their throats by hitting themselves on the back of the neck), they return to their places in the circle, and the four who shot at them step into the center and are shot at by a third four. When the second four have "gaɔnúde," they return to their places, and the third four take their places in the middle; and so on till all have been shot at once. Then the first four step into the center again, and the last four shoot at them. This ends the dance.

§ 254. None but members can take part in the dance, and the "úwa-

weqáqa." This uwaweqaqa or iqta was never witnessed by J. La Flèche and Two Crows. No one ever said to them, "I saw the uwaweqaqa in the Wacicka dance." But they have heard persons speak in ridicule of a woman who joined the dance without her husband. Of course, if the woman's husband or other kinsman was present, he would be unwilling for any stranger to abuse his wife or kinswoman. The women admitted to this society were not necessarily the tattooed women.

That there is some foundation for the statement that lewd rites occurred during some part of the dance is more probable after a comparison of the season for this dance with the Ponka phrase, "Wíhe, déje t'aⁿ. Aⁿ¢añ'giqtá!"—*My little sister* (or *my female friend*), *grass abounds.* (*Let*) *us delight in each other!* Frank La Flèche thinks that this is without foundation. He says that four days were spent in the secret initiation, the public ceremony taking place on the last day.

§ 255. When Frank La Flèche witnessed the public ceremony in the lodge the members were stationed all around the circle. The four candidates were placed between the fire-place and the door, and thence they began to dance around the fire, moving from left to right. As they were dancing around, one of the members having an otter-skin bag left the outer circle, and began to follow them, moving in a circle between that of the dancers and that of the members. While the singing was going on, he shot at each of the four candidates with his sacred bag. After these were shot at, all the members danced, and then any one of them was at liberty to shoot at the others.

§ 256. *The Iⁿ-kug¢i dance.*—Iⁿ'-kug¢i a¢iⁿ'-ma, *or* Qubé iⁿ'-kug¢i a¢iⁿ'-ma, *The society of those who have the translucent stones.* ɖa¢iⁿ-naⁿpajĭ says that this is a bad dance, the members being "wáspajĭ." Each member has one of the iⁿkug¢i, with which he or she shoots at some one else. These iⁿ-kug¢i are small stones which are translucent and white. The members of this society claim the power of shooting secretly any some one with déje or sidúhi, and making him lame. ɖa¢iⁿ-naⁿpajĭ also says that they sometimes shoot persons secretly with "ɟamaⁿ'," which is a piece of the intestine of a wolf, and about six inches long. This produces fatal consequences. Frank La Flèche has heard this asserted, but it is denied by Joseph La Flèche and Two Crows. They do not know about the following, for which ɖa¢iⁿ-naⁿpajĭ is the authority: "In order to shoot the iⁿ-kug¢i, it is put in a hollow at the base of the eagle fan, which is waved forward very rapidly, hurling the stone to a great distance, about forty or fifty yards."

There is no special season for this dance. They dance all day, and sometimes at night; and there are not separate places for the two sexes, as men and women dance "íki¢ib¢aⁿ," mixed, or intermingled.

Drums, rattles, etc., are used, as in the Wacicka a¢iⁿ. Some men wear large leggings as well as breech-cloths; but no gay clothing. The women wear sacques, leggings, red blankets, and bead necklaces; and they redden the parting of the hair and the cheeks somewhat as

they do for the Wacicka a¢i$^{n}$. The men wear many plumes in their hair, and carry fans made of eagles' wings. They have no regular patterns for painting themselves; but they use as paint either "wasejide-nika" (Indian red) or "ma$^{n}$¢iñka-qude" (gray clay).

The only surviving leaders of this society are ⌊enuga and Sihi-duba. Among the members are B¢a$^{n}$-ti, ⌊and-una$^{n}$ha$^{n}$, Ui¢a$^{n}$be-'a$^{n}$sa, Cage-skă, ⌊aqiewa¢ĕ-jiñga, ⌋a-sa$^{n}$, Inigani, Maja$^{n}$kide, Si-qude, Năde-wahi, and some women. According to J. La Flèche, this is one of the dances that are considered "waqube." It is obsolescent. B¢a$^{n}$-ti, Sihi-duba, and ⌊and-una$^{n}$ha$^{n}$ are the waze¢ĕ or doctors who treat biliousness and fevers; but they do not go together to visit a patient.

§ 257. *The Buffalo dance.*—⌊e-i¢aé¢e-ma, *The society of those who have supernatural communications with the Buffaloes, The Buffalo dancers.* Four of the men of this dance are good surgeons. Two Crows' father was a member of the society, and understood the use of the medicine, which he transmitted to his son. Two Crows says that having inherited the right to the medicine, he understands the duties of the doctors, but not all about the dance, as he has paid no attention to the "ąe i¢ae¢ĕ," which has been the duty of others.

Until recently, the four doctors of this society were as follows: Ni-¢áctage, the principal doctor, now dead; Two Crows (now the principal one), ⌋a¢i$^{n}$-gahige, of the ⌊a-da, and Zizika-jiñga, of the Iñkesabĕ. Two Crows gives portions of the medicine to the other doctors, and they "wézɛ¢ĕ," *administer it to the patients.* A$^{n}$ba-hebe used to be a doctor. The other members whose names have been obtained are these: Duba ma$^{n}$¢i$^{n}$, ⌊e-uꞑa$^{n}$ha, Icta-q¢u'a, ⌊enuga-ja$^{n}$-¢iñke, I$^{n}$c'age-wahi¢e, and Gackawañg¢ɛ. ⌊ahe-jiñga, now dead, was a member.

§ 258. *Times for dancing.*—After the recovery of a patient, the members of this society hold a dance, to which they may invite the members of the Horse dance, but not those of the Wolf dance.

When they are not called to dance after the recovery of patients, Two Crows says that they may dance when they please, and invite the members of the Horse and Wolf dancing societies to join them; but the latter can never dance independently of the Buffalo dancers.

⌋a¢i$^{n}$-na$^{n}$paji says (but Two Crows denies) that "when the corn is withering for want of rain the members of the Buffalo society have a dance. They borrow a large vessel, which they fill with water, and put in the center of their circle. They dance four times around it. One of their number drinks some of the water, spurts it up into the air, making a fine spray in imitation of a fog or misting rain. Then he knocks over the vessel, spilling the water on the ground. The dancers then fall down and drink up the water, getting mud all over their faces. Then they spurt the water up into the air, making fine misting rain, which saves the corn."[20] If this is not done by the members of the Buffalo society, it is probably done by others, and ⌋a¢i$^{n}$na$^{n}$paji has made a mis-

[20] In the Osage tradition, corn was derived from four buffalo bulls. See §§ 31, 36, 123, and 163.

take only in the name of the society to which they belong. "The fog occurred on the fourth day after Siqude, of the I$^{n}$-kug¢i society, treated a patient. He used to predict the fog; and the patient was caused to walk. I never heard of the doctors, spurting water to cause the fog." (*Frank La Flèche.*)

§ 259. *Painting and dress.*—The men rub ma$^{n}$¢iñka sabĕ (black earth) or ma$^{n}$¢iñka ąu-qude (a greenish gray earth) over their bodies and arm-joints. Some rub earth (ma$^{n}$¢iñka-sabĕ *or* ma$^{n}$¢iñka ąu-qude) on the face, from the right ear to the mouth, then from the left corner of the mouth to the left ear. Some of the men wear only the leggings and breech-clothes; others wear in addition to these robes with the hair outside. Some wear buffalo tails fastened in belts. Some have sticks of red willow with the leaves on, which they use as staffs in the dance. Each of four men used to put the skin of a buffalo head over his head, the horns standing up, and the hair of the buffalo head hanging down below the chest of the wearer. It was over his forehead, as well as down his back, but not over his eyes. He also wore a necklace of the hair that grows on the throat of a buffalo. Two Crows says that now some wear necklaces of "ąéhi$^{n}$," that is, the old hair, either of a bull or that of a cow, which has been shed. Those who do not wear these ąéhi$^{n}$ necklaces, wear "ja$^{n}$áqa."

In former days, no women participated; but now about two are present at the feast, though they do not join in the dance. They wear robes with the hair outside, according to ⅁a¢i$^{n}$-na$^{n}$paji. No gourd rattles are used. One man acts as "quxa," and the rest help him. There may be one or two drums, for which there are from two to five drummers. The various movements of the buffalo are imitated by the dancers.

§ 260. *The Horse dance.*—Cañ'ge-i¢ae¢é-ma, *The society of those who have supernatural communications with horses, The members of the Horse Dance.*

No women belong to this society. Two Crows says that none are doctors, and that they never dance except in connection with the buffalo dancers, when invited to the feast of the latter, and then they imitate the various actions and gaits of horses. No shooting occurs as in the dance of the Wacicka a¢i$^{n}$-ma. They whiten themselves, rub earth on their shoulders, and Indian red on some parts of their bodies. They wear necklaces of horses' manes, from each of which a feather is suspended. Each one wears a horse's tail in a belt. The tail is dried stiff, and stands out from his body. At short intervals are suspended feathers.

*Members.*—Wacuce was a member. Those now living are G¢eda$^{n}$-naji$^{n}$, Eona$^{n}$-hañga (who has no horses!), Wata$^{n}$-naji$^{n}$, Maja$^{n}$-kide, Ui¢a$^{n}$-be-'a$^{n}$sa, ⅁a-sa$^{n}$-naji$^{n}$, Tcaza-¢iñge, Cyu-jiñga (who wears a necklace), Haci-ma$^{n}$¢i$^{n}$, Waq¢a-¢uta$^{n}$, Une-ma$^{n}$¢i$^{n}$, Waniąa-waqĕ, Ta-i-kawahu, Jiñga-gahige, ⅄e-baha, etc. According to Mr. J. La Flèche, this dance is now obsolete.

§ 261. *The Wolf dance.*—Ca$^{n}$ąañga-i¢ae¢é-ma, *The society of those who have supernatural communications with Wolves, The members of the*

*Wolf Dance.* These men cannot dance except with the buffalo dancers, and with the consent of the latter. Two Crows has seen them dance but twice. He and J. La Flèche do not know much about them.

In this dance there are no women, and none are doctors, according to La Flèche and Two Crows. No shooting is done, though the dancers act mysteriously. They wear wolf skins, and redden the tips of the wolves' noses, according to ɖa¢iⁿ·naⁿpajĭ and Frank La Flèche (but denied by Two Crows). They paint their bodies in imitation of the "blue wolves, caⁿɻañga-ɻú-ma égaⁿ·ma-¢aⁿ." Those who have held enemies, or have cut them up, paint the hands and wrists red, as if they were bloody. Others whiten their hands, wrists, ankles, and feet. Some go barefoot. All whiten their faces from the right ear to the corner of the mouth; then from the opposite corner of the mouth to the left ear. They dance in imitation of the actions of wolves.

§ 262. *The Grizzly bear dance.*—Maⁿtcú-íɕaeɕé-ma, *Those who have supernatural communications with grizzly bears*, also called Maⁿtcú-gáxe watcígaxe, *The dance in which they pretend to be grizzly bears.* This has not been danced for about ten years, so La Flèche and Two Crows cannot tell who belong to the society. In former days there were women that belonged, but in modern times none have been members.

This dance is spoken of by La Flèche and Two Crows as an "úckade," *a sport* or *play*, and an "úɻigaxe," *a game.* It is danced at any season of the year that the members decide upon; and all the people can witness it. During the day, it takes place out of doors, but at night it is held in a lodge.

The man who receives the drum calls on others to help him, speaking to each one by name. Then while the first man beats the drum, the two, three, or four helpers sing and the rest dance as grizzly bears, and imitate the movements of those animals.

*Painting and dress.*—They make the whole body yellow, wearing no clothing but the breech-cloth. They rub yellow clay on the backs and fronts of their fingers and hands, and sometimes over the whole of the legs. Sometimes they redden the whole of the legs. Some whiten themselves here and there; some rub Indian red on themselves in spots. Some wear very white plumes in their hair, and others wear red plumes (hiⁿqpé). One man wears the skin of a grizzly bear, pushing his fingers into the places of the claws. Some wear necklaces of grizzly bears' claws.

§ 263. The ɖa¢iⁿ·wasabe *or* Witcitâ *dance.*—ɖáɕiⁿ·wasábe watcígaxe ikágekíɕĕ, *The society of the* Witcitâ *or* ɖáɕiⁿ·wasábe (Black bear Pawnees).

The members of this society have a medicine which they use in three ways: they rub it on their bodies before going into battle; they rub it on bullets to make them kill the foe, and they administer it to horses, making them smell it when they are about to surround a buffalo herd. If horses are weak they make them eat some of the medicine, and smell the rest. Similar customs are found among the Pawnees and Ponkas.

A man thinks, "I will boil," and he invites to a feast those who have the medicine of the Witcitâ society. On their arrival he says, "on such a day we will dance." Two or three men boil for the feast to be held in connection with the dance.

It takes three days to prepare the candidate, and this is done secretly. On the fourth day there is a public ceremony in an earth lodge, during which the candidate is shot with the red medicine. Frank La Flèche has witnessed this, and says that it closely resembles the public ceremony of the Wacicka society.

§ 264. *Paint and dress.*—The breech-cloth is the only regular garment. Two Crows and La Flèche say that all whiten their bodies and legs all over; but ꓷa¢iⁿ-naⁿpajĭ says that some draw white lines over their limbs and bodies. Some paint as deer, putting white stripes on their limbs and bodies; others appear as bald eagles, with whitened faces. Some wear caps of the skin of the "ʒíkaqúde" or gray fox. Some wear necklaces of the skin of that animal; and others have on necklaces of the tail of a black-tailed deer and that of an ordinary deer, fastened together. Some carry a "ʒikaqude" skin on the arm, while others carry the skin of the "maⁿ¢iñ'kacéha," or red fox, of which the hair is very red, and the legs and ankles are black. Some wear feathers of the great owl around the wrist; and others carry fans made of the feathers of that bird. "Makaⁿ'-jide ha u¢áha baqtáqta nusi-áq¢a-hnaⁿi"—*The red medicine with the skin adhering to it* (being about three inches long) *is tied up in a bundle, which is worn* "nusi-aq¢a," *like a coiled lariat, with one end over the left shoulder, and the other under the right arm.*

Each of the four singers has a gourd rattle, a bow, and an arrow. He holds the bow, which is whitened, in his left hand, and the rattle and arrow in his right. He strikes the arrow against the bow-string as he shakes the rattle.

All the members have whistles or flutes, some of which are a foot long, and others are about half a yard in length. The dancers blow theirs in imitation of the "quꓘa."

*Members.*—Only one woman belongs to this society; but the male members are the following: G¢edaⁿ-najiⁿ, ꓷa¢iⁿ-gahige, Muxa-najiⁿ, ꓶe-uꓘaⁿ-ha, Zaⁿzi-mande, Wajiñga, ꓕni-ti¢aⁿ, Qi¢a-gahige, ꓶenuga-jaⁿ-¢iñke, Zizika-jiñga, ꓘaxe-naⁿp'iⁿ, Cage-duba, Eɔnaⁿ-hañga, Ag¢iⁿ-duba, Jiñga-gahige, and Wajiⁿ-¢icage.

The members of this society would eat no green corn, fruit, etc., till consecrated by the dance. A few ears of corn were divided among the dancers. Then they could eat as they pleased.

§ 265. Watcí-wa¢upí.—This society has not had a dance for about thirty years among the Omahas. It is like the dance of the Wasejide a¢iⁿma, which has a medicine that resembles that of the ꓷa¢iⁿ-wasabe in its use. During the day women danced with the men; but at night

the men danced alone. This is said to be one of the ancient tribal dances.

§ 266. Wasé-jíde aɸi$^{n}$-ma, *Those who have the Red Paint or Medicine.*— This is a society of women dancers. They seldom meet. Their dance is like that of the Watci-waɸupi. Ɑaɸi$^{n}$-na$^{n}$pajĭ says that the dance is sacred. La Flèche and Two Crows have never seen it. They invite the members to a feast, as do the Wacicka aɸi$^{n}$-ma; but no shooting is done. The men act as singers, while the women dance. All the women are allowed to join in this dance, which is held when the grass is green in the spring. Sometimes a man joins in the dance, but that is the exception. [Frank La Flèche says that men do take part in this dance, and that the women do not carry the medicine.][21]

This society has a medicine consisting of the bottoms of several joints or stalks of a certain kind of grass, which are tied up in bundles. One man carries a bundle in his belt, and the rest are put in a safe place. This is the medicine, according to Ɑaɸi$^{n}$-na$^{n}$pajĭ, which warriors carry. If they meet an enemy they open the bundles and rub the medicine over their bodies to protect them from the missiles of the enemy. They think that this medicine will cause the enemy's guns to miss fire, or else the balls, when sent, will not hit them. The only painting is red, which is on the cheeks, chin, and chest of the dancer. A line is drawn from each corner of the mouth back to the cheek, and there is one made from the lower lip down under the chin, and it is continued down the chest until it is about as low as the heart.

§ 267. The Ha$^{n}$/he watcí (Ⱡɔiwere, Ha$^{n}$/he wací) is not "The Night Dance," as its name implies. It is an ancient dance, which is not used now. According to Ɑaɸi$^{n}$-na$^{n}$pajĭ, it is "qubé áta," *very sacred* (for persons), and it is danced in the later fall, when the people have killed a great many deer, or many of the enemy. Two Crows and La Flèche say that it is "úwahéhajĭ, núaɻáɸica$^{n}$, *a bravery dance, pertaining to men;*" but they do not know all the particulars. During the day women danced, and the men sang for them. Occasionally a man joined in the dance. At night the men danced alone. But only those who had been captains, or had killed foes, or had brought back horses, or had been warriors, had a right to take part in the dance.

Mr. J. La Flèche said that there was some connection between this society and the Iñgɸa$^{n}$-iɸaeɸe-ma.

The Héde-watcí was a "nikie dance," which occurred on a festival, and in which the whole tribe participated. (See §153.)

The Wé-watci, or Scalp dance, is the women's dance, in which all join who may so desire. (See War Customs, § 215.)

The Míɳasi watcí, or Coyote dance, is described in the chapter on War Customs, § 203.

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[21] The Kansas have the Maka$^{n}$ jüdje, Red Medicine, and the Osages the Maka$^{n}$ oüɻse watsi$^{n}$, Red Medicine Dance. The leader of the latter is a man. The Kansas used to have the Wase jide aɸi$^{n}$-ma.

The He¢úcka dancing society is described in the chapter on War Customs, §§ 214, 216.

The Hé watci is part of the He¢ucka dance. (§ 217.)

§ 268. T'é gáxe watci, *The dance of those expecting to die.*—This has not been observed for fifteen years by the Omahas. It is explained thus, "Ukít'ĕ ɻíctĕ, at'é támiñke, e¢égaⁿ égaⁿ úwatcigáxe gáxai."—*As one thinks, 'I will die if there are any enemy,' they make the dance.*

This is the men's dance, being "wacuce-aɻá¢icaⁿ," *i. e.*, something pertaining to bravery. They always go prepared to meet the enemy and to fall in battle. It is danced at different seasons of the year. A woman with a good voice is admitted as a singer. Two or three beat a drum. Two men carry "waq¢éq¢e-'aⁿsá" in their hands as they dance. These objects resemble the "waq¢éxe-¢áze," but there is a different arrangement of the feathers.

FIG. 40.—The waq¢éq¢e-'aⁿsa.

All paint themselves as they please, and carry "ɻahánuɻa déxe" or rattles made of green hide.

§ 269. *The Make-no-fight dance.*—Má¢a wátcigáxe, the "Napé-šníkaġápi" of the Dakotas, has not been witnessed among the Omahas for many years, though it used to be common to the Omahas, Ponkas, and Dakotas. La Flèche and Two Crows have heard of it, but have not seen it. ɻa¢iⁿ-naⁿpajĭ says "I have not seen it since I have been grown. It was in use here long before my time." It is a bravery dance. Drums are beaten. The dancers hold gourd rattles, and each one carries many arrows on his back as well as in his arms. The members vow not to flee from a foe. They blacken themselves all over with charcoal. About fifty years ago two members went into a fight armed only with deer's claw rattles that had sharp iron points at the ends of the handles. They rushed among the foe and stabbed them before they could draw their bows.

§ 270. ɻa-ug¢aⁿ Watci, *The dance in which buffalo head-dresses were put on*, has long been obsolete. It was a bravery dance. ɻa¢iⁿ-naⁿpajĭ knew about its occurring once when he was very small. Only very brave men could participate. On their heads they put head-dresses to which buffalo horns were attached. They bore shields on their backs; they rubbed earth on themselves. Any one who had stabbed a foe with a spear carried it on his arm; and he who had struck a foe with any weapon did likewise. Those who were only a little brave could not dance.

§ 271. Égi'aⁿ-wátcigáxe, *The Visitors' dance of relating exploits.*—When a friendly visit has been made horses are given to all the visitors who

are invited to dance. "Égi'aⁿ waɸátcigáxe tai," *You will dance the dance of exploits.* The visitors sit in a circle and the members of the home tribe sit outside. A drum, stick, a "crow," and a club or hatchet are placed inside the circle. There is no singing. When the drum is struck one of the visitors dances. He who has something to tell about himself takes the crow and attaches it to his belt. Then he takes the club or hatchet. When the drummers beat faster all of them say, "Hĭ! hĭ! hĭ!" When they stop beating the dancer tells what he has done. Pointing in one direction with his club or hatchet he says, "In that place I killed a man." Pointing elsewhere, he says, "There I took hold of a man." "I brought back so many horses from that tribe." Sometimes they beat the drum again before he finishes telling his exploits. Sometimes a man recounts much about himself, if very brave, taking four such intervals to complete his part of the performance. When he has finished he hands the crow and weapon to the next dancer. There are four dancers in all. Some tell their exploits two or three times, *i. e.*, they may require two or three intervals or spaces of time after the beating of the drum to tell all that they have to say. When the fourth dancer stops the dance is over. (See the He watci, at the end of the Heɸucka dance, § 217.) This is not danced very often.

§ 272. *The Ghost dance.*—Wanáxe-íɸaeɸé-ma are those who have supernatural communications with ghosts. The dance is called Wanáxe íɸaéɸe wátcigáxe. Formerly the Ponkas had this dance, and the Omahas saw it and coveted it; so they took it. It has not been danced by the Omahas for about forty years. La Flèche and Two Crows never saw it, but they have heard of it; and they speak of it as "úqtajĭ; edáda ⁿ ígaxewaɸájĭ," *undesirable; totally unfit for any use.* But ɖaɸiⁿ-naⁿpajĭ says that it was an "úwaqube," *a sacred thing.* No women participated. A feast was called, the men assembled, a drum was struck, and they danced. The dancers made their bodies gray, and called themselves ghosts.

§ 273. *The Padanka dance.*—The Pádañka watcí (Camanche dance?) has not been held among the Omahas since ɖaɸiⁿ-naⁿpajĭ can remember. The Omahas bought it from another tribe, and had it a long time. When Mr. J. La Flèche was small, he saw a little of it. He and Two Crows have heard about it. The drum was struck; the dancers reddened their bodies with Indian red; they wore head-dresses of crow feathers or of the large feathers of the great owl. Each one carried the "ɋacáge" or rattles of deers' claws.

§ 274. *The Hekána dance.*—This was introduced among the Omahas by the Otos when they visited the former tribe in August, 1878. The Otos call it "He-kaⁿ'-yu-há." It is found among the Sacs and other Indians south of the Omahas. This is the dance in which the young people of both sexes participate, and it is called "úmiⁿɸígɸaⁿ," as it leads the young men to think of courting the girls.

When a young man wishes to have a chance for saying something to

a girl whom he admires he boils for a feast, and invites the guests. All the young men assemble, and the unmarried girls and boys attend, though the girls never go without a proper escort. Mothers take their daughters, and husbands go with their wives.

The dance is held in a large earth-lodge, in the middle of which a fire is kept up, and candles are placed on supports around the walls. Sometimes the boys blow out the lights all at once after a preconcerted signal, and great confusion ensues. All wear their gayest clothing and plenty of ornaments. Fine ribbon is worn on clothing, hats, etc.

When a youth wishes to court a girl, he waits till the girl approaches him in the dance. Then he takes her by the hands, and dances facing her. As there is great confusion, no one else can hear him addressing her, his face being very close to her's. Every time the drumming stops, the dancers in each pair change places, but they still face each other.

When a woman or girl wishes a man as a partner, she takes him by the hands when he gets close to her in the dance.

When a distant "mother's brother" meets one whom he calls his niece, he may address her thus in sport: "A$^{n}$wátcigaxe taí, wihé!" *i. e.*, "Second daughter of the family, let us dance." She replies, "Give me pay." So he makes her a present of a necklace or of some other ornament, and she dances with him. A real uncle never acts thus.

Sometimes when a girl spies among the spectators an aged man who is a kinsman, she will rush to him in sport, take him by the hands, pull him to his feet, and make him dance with her. On the other hand, when a young man spies an aged female relative looking on, he may rush to her, in sport, and pull her into the ring making her dance with him.

There is a feast after the dance. If there is but a small supply of food only the women and girls eat; but if there is plenty, the men wait till the others have eaten awhile, then they partake. After the feast the guests go home; but they sleep nearly all of the following day, as they are very tired.

§ 275. *The Mandan dance.*—The Ponkas obtained this dance from the Dakotas and the Omahas learned it from the Ponkas. None but aged men and those in the prime of life belong to this society. All are expected to behave themselves, to be sober, and refrain from quarreling and fighting among themselves. (For an account of one of their feasts, see § 111.)

This dance is celebrated as a bravery dance over the bodies of any warriors who have been slain by the enemy. Each body is placed in a sitting posture in the lodge, as if alive, and with a rattle of deers' claws fastened to one arm. (See Contributions to N. A. Ethnology, Vol. VI, Part I, pp. 431, 452.) This dance has been obsolete for some time among the Omahas. It was danced in 1853. (See § 218.)

§ 276. *The Tukála dance* was obtained from the Dakotas by the Ponkas, who taught it to the Omahas. This dance is for boys what the Mandan dance is for aged men and men in the prime of life. Its rules resemble

those of the other dance, but the songs and dances are different. The behavior of the members is not as good as that of the members of the Mandan society, though quarreling is forbidden. This is a bravery dance. Two women attend as singers. Two men who do not fear death are the leaders in the dance. Each one carries a "wahékuzi" or "waqǫ́xe-ǫ́aze, of which the end feather on the bent part of the pole is white, and the pole is wrapped in a piece of otter skin.

§ 277. *The Sun dance* has not been practiced among the Omahas. They can give no account of it, though some of the ceremonies of the Hedewatci, such as the procession to the place for felling the tree, the race for the tree, the felling of the tree, the manner in which it is carried to the village, and the preparation of the "ujéǫi," agree very remarkably with the account of the Sun dance read by Miss A. C. Fletcher before the American Association for the Advancement of Science, in August, 1882. The Ponkas obtained this dance from the Dakotas.

§ 278. The "Waná wátcigáxe," or *Begging dance*, is not found among the Omahas; but among the Ponkas, Dakotas, etc., the members of any dancing society do dance at times in order to get presents.

§ 279. *Ponka dancing societies.*—The Ponka men have two other dancing societies: the Gak'éxe (which the Omaha Duba-maⁿǫ́iⁿ says is the same as the Hiⁿská-yuhá of the Dakotas) and the ǰadúxe. No information has been gained respecting these societies.

The Ponka women have three dancing societies: the Pa-ǫ́ataⁿ, the Gat'áua, and the Maⁿ'zěskă naⁿ'p'iⁿ (Those who wear silver necklaces).

# CHAPTER XI.

## REGULATIVE INDUSTRIES.

### THE GOVERNMENT.

§ 280. Regulative industries are such as pertain to the government of the tribe, embracing all organizations which are "wewaspeaꞁaɢicaⁿ," *i.e.*, such as are designed to make the people behave themselves.

Everything that can be thus used is a "wewaspe." Among the former are the gentile system (Chap. III), religion, and government, with the last of which is associated the law. With the latter may be classed the sacred tents, sacred pipes, chiefs, etc. A term of broader significance is "Wakandaꞁaɢicaⁿ," *Pertaining to* or *derived from Wakanda*, the Deity or Superior Being. Most of the things which are wewaspeaꞁaɢicaⁿ are also Wakandaꞁaɢicaⁿ, but there are things which are Wakandaꞁaɢicaⁿ that are not directly connected with the government of the state, *e. g.*, the law of catamenial seclusion.

§ 281. *Governmental instrumentalities.*—The following wewaspe or government instrumentalities are regarded as Wakandaꞁaɢicaⁿ: The sacred pipes, including the war pipe, the calumet pipes, the sacred pole, the sacred ꞁe-saⁿ-ha, or hide of a white buffalo; the clam shell, the chiefs, the keepers of the three sacred tents, the seven keepers of the sacred pipes, the gentes, subgentes, and taboos. The following are considered of human origin: The policemen and the feasting societies. "The way to a man's heart is through his stomach" is a familiar saying. So feasting societies tend to promote the peace of the community, as those who eat together, or give food to one another, are bound together as friends. (See § 246.)

§ 282. *Government functions.*—Government functions are of three classes: legislative, executive, and judicial; but these are not fully differentiated in the Omaha state. There is a still further functional division running through the legislative, executive, and judicial departments, giving civil, military, and religious government. Among the Omahas civil and religious government are scarcely differentiated; but military government is almost entirely so. (See War Customs, Chapter IX.)

§ 283. There does not seem to be a distinct order of priests who perform all religious functions. Some of these functions are performed by the regular chiefs, others by the keepers of the sacred pipes, others by the four waɢaⁿ during the buffalo hunt, and others by the leaders of the dances. Conjurors also pretend to perform mysterious or sacred rites. At the same time, the functions thus performed by the chiefs, keepers

of the sacred pipes, and the waɸaⁿ are of a civil character. The chiefs are religious officers during the buffalo hunt; they are always praying to Wakanda, and showing the pipes to him. They do not act as leaders of the hunt, which is the office of the waɸaⁿ, though they can make suggestions to the latter. They cannot draw their robes tightly around them when they are thus praying, and they must be sober and gentle.

The keepers of the sacred pipes are regarded as chiefs in some sense, though they are not allowed to speak in the tribal assembly. "Each chief is a member of the tribal assembly, though he is not a chief by virtue of such membership, but by choice of the members of his gens." While the chieftainship is not hereditary, each chief tries to have one of his near kinsmen elected as his successor.

§ 284. *Head chiefs.*—Those of the highest grade are the "nikagahi uju," or principal chiefs. There have always been two of this rank among the Omahas till the late change of the government in 1880. The head chiefs have generally been chosen from the Hañgacenu gentes, though there is no law forbidding the selection of a member of one of the Ictasanda gentes.

The following is the succession of the principal chiefs of the Omahas from the time of the celebrated Black Bird:

I. Gahige-ɻañga, The Elder Gahige, commonly called Wajiñga-sabe, Black Bird, of the Maⁿɸiñka-gaxe (an Ictasanda) gens; and ᒪe-saⁿ-iⁿc'age, The Elder ᒪe-saⁿ, or The Venerable man, Distant-white Buffalo, of the ɸatada (Hañgacenu) gens. II. ᒪe-saⁿ iⁿc'age (*continued*), and Aⁿpaⁿ-skă, White Elk, of the Wejiⁿcte (a Hañgacenu) gens. III. ᒪe-saⁿ iⁿc'age (*continued*), and Aⁿpaⁿ-ɻañga, Big Elk, of the Wejiⁿcte gens, subsequently known by his Pawnee name, Ta-i'-ki-ta'-wa-hu. This was the celebrated Big Elk mentioned by Long, Say, and others in 1819–'20. IV. Taikitawahu, and Ůhaⁿ-jiñga or Waháxi, called Icta-ɻañga, Big Eyes, by the white men. The latter was an Ictasanda man. He married a sister of Gɸedaⁿ-najiⁿ, and this was one reason why the latter succeeded him as one of the principal chiefs. V. In 1843, Aⁿpaⁿ-ɻañga jiñga, the Younger Big Elk, of the Wejiⁿcte gens, and Gɸedaⁿ-najiⁿ, Standing Hawk, of the ɸatada gens. Another reason for the appointment of the latter was the friendship existing between his father, ᒪe-saⁿ, and Taikitawahu. VI. On the death of Aⁿpaⁿ-ɻañga, his adopted son, Icta-maⁿzĕ, Iron Eyes, or Joseph La Flèche, was made his successor, and so he and Gɸedaⁿ-najiⁿ were the principal chiefs till the former was set aside. Since then there has been confusion about the head chieftainship, as well as about the chieftainship in general, ending in the election of seven chiefs of equal rank in 1880.

§ 285. *Subordinate chiefs.*—Next to the nikagahi uju are the under chiefs, or nikagahi, of whom the number in each tribe varies from time to time. When both of the head chiefs retire from office or die there is an entire change of the subordinate chiefs; all must resign, and others must be elected to fill their places. Thus when Aⁿpaⁿ-ɻañga jiñga and

Gɬeda$^{n}$-naji$^{n}$ succeeded to the head chieftainship, in 1843, fully sixty subordinate chiefs were appointed. Among these were A$^{n}$ba-hebe, of the ⌊a-da gens; Icta-duba, of the Wasabe-hit'ajĭ subgens; ⌋asi-duba and Za$^{n}$zi-mandĕ, of the ✕a$^{n}$ze gens; Ta$^{n}$wa$^{n}$-gaxe, of the Ma$^{n}$ɬiñka-gaxe gens; and ⌋aɬi$^{n}$-gahige, of the ⌊a-da. Some chiefs have been appointed by the United States Government, and so have been recognized as chiefs by the United States agent in his councils with the tribe; but these are distinct from the regular chiefs. In 1878 the writer found three of this kind of chiefs among the Omahas. They had been appointed by the United States about the year 1869. Cañge-skă was made chief in the place of Ta$^{n}$wa$^{n}$-gaxe; Ibaha$^{n}$bi, instead of his father, Wanuxige, of the Ictasanda gens; and Waniɻa-waqĕ, the keeper of the sacred pipe of the ⌊a-da was the third.

In 1878 the following were the chiefs who met the agent in councils: Gɬeda$^{n}$-naji$^{n}$ and his brother, ⌋ede-gahi, who were considered the head chiefs by some; Ma$^{n}$tcu-na$^{n}$ba, of the Hañga; Gahige, of the Iŭke-sabĕ; Mahi$^{n}$-ɬiñge, of the Weji$^{n}$cte; Wacka$^{n}$-ma$^{n}$ɬi$^{n}$, the third ⌽atada chief; Cañge-skă, Waniɻa-waqĕ, and Ibaha$^{n}$bi. The last three always appeared to stand together, forming a third party in the tribe, as opposed to the chiefs' party (to which the others belonged), and that of the young men or progressives.

§ 286. *Omaha chiefs elected in March*, 1880.—These were elected by an assembly of the whole tribe, in open council, and by a show of hands. All are of equal rank, there being no principal chiefs:

⌋ede-gahi (of the chiefs' party) and Na$^{n}$pewaɬĕ or Cyu-jiñga (of the young men's party), of the ⌽atada (Gɬeda$^{n}$-naji$^{n}$ and Wacka$^{n}$-ma$^{n}$ɬi$^{n}$ were deposed). Gahige (of the chiefs' party) and Duba-ma$^{n}$ɬi$^{n}$ (of the young men's party), of the Iŭke-sabĕ. ✕axe-ɬa$^{n}$ba, or Two Crows (of the young men's party), and Icta-basude (of the chiefs' party), of the Hañga. The latter was substituted for his aged father, Ma$^{n}$tcu-na$^{n}$ba. The only Ictasanda chief elected was Cañge-skă, of the Ma$^{n}$ɬiñka-gaxe. Mahi$^{n}$-ɬiñge, Waniɻawaqĕ, and Ibaha$^{n}$bi were ignored.

A few months later three more were elected: Sĭnde-xa$^{n}$xa$^{n}$ instead of Waniɻa-waqĕ, of the ⌊a-da; Waha$^{n}$-ɬiñge, of the ⌊e-sĭnde; and Ibaha$^{n}$-bi, of the Ictasanda, making ten chiefs.

§ 287. *Keepers of the sacred pipes.*—These have been chiefs among the Ponkas, and it seems probable that they are reckoned as such among the Omahas. (See the account of the inauguration of Ponka chiefs, § 289.)

Though no council could be opened without their assistance, they were not allowed to take part in any of the deliberations. (See § 296.)

§ 288. *Who can be elected chiefs.*—As a rule, they must be such as have won a good reputation in the tribe. A generous man, one who has given more presents or feasts than his kinsmen, stands a chance of being elected a chief by and by. The presents, however, must be made to the poor and aged, of those who are not kinsmen. Some-

times a man is elected who has not led a good life; but they make him chief with the hope that the new responsibilities resting on him may sober him, and make him a wise man. Sometimes a man succeeds to the chieftainship through the efforts of some kinsman or affinity who is a chief or head chief.

*Occasions of such elections.*—The resignation or death of one of the principal chiefs; the resignation of both of the principal chiefs, or the resignation of one and the death of the other.

§ 289. *Sacred or mysterious rites pertaining to the initiation or inauguration of chiefs.*—(1). Among the Ponkas. Ma$^{n}$'egahi, of the Hisada, told the following: Muxa-naji$^{n}$ of the Wacabe, Ce-naji$^{n}$ of the Maka$^{n}$, ɸa'ega$^{n}$ of the Nuqe, Si-ɸiñge of the Maka$^{n}$, Ma$^{n}$ze-si-ugada$^{n}$ (of the half-breed band), and Canugahi of the ɸixida, carry the six sacred pipes four times around the tribal circle. Muxa-naji$^{n}$ puts up a large tent (in the middle of the circle), unwraps the bundle containing the six pipes, and then the five other men accompany him around the circle.

The sacred pipes are feared by all except those who are to be made chiefs, sometimes four, five, or six men. These are outside (of their lodges), and as the old men come around, if they have agreed to become chiefs, they put the pipe-stems to their mouths, but they do not inhale any of the smoke. When the old men have gone around the fourth time the chiefs assemble in the large tent. The women and children stay outside or back of the circle, as they are afraid of the pipes. Even the horses are sent to the rear. When the chiefs elect enter the large tent they give many horses to the retiring chiefs. Then they put the pipes to their mouths and inhale the smoke, for if they should refuse to inhale it, they would die very soon thereafter, before the end of the year.

FIG. 41.—The Ponka style of hañga-ɣi'a$^{n}$ze.

Nuda$^{n}$-axa's account of the ceremonies at the time of his election is as follows: When an old chief resigns, a tent is set up in the middle of the circle. They bring back some wild sage, which is used as a bed for the sacred pipes. These are laid on the wild sage in the middle of the tent, next to the sacred buffalo skull. The hañga-ɣi'a$^{n}$ze or privileged decoration is painted on the skull, into the nostrils of which some sprigs of wild sage are thrust. All the chiefs paint the hañga-ɣi'a$^{n}$ze on their faces, and stick plumes in their hair. They wear buffalo robes with the hair outside, and redden their arm-pits, elbows, and the toes of their moccasins. They redden blankets at the elbows and next to the arm-pits, in imitation of the buffaloes. The retiring chiefs say to their successors,

"Qubéɣi¢ái-gă!" *i.e.*, "Cause yourselves to be sacred by means of the animals that you see in your dreams when you fast." When they have left the large tent, and have returned to their respective lodges, they sit with their robes over their heads, and before they leave their lodges again, they must make new tent-flaps, which is a sacred act. The bearers of the sacred pipes are Ce-naji$^{n}$ of the Maka$^{n}$, He¢icije of the Nuqe, ɖa¢i$^{n}$-gahige (of the Wajaje ?), Muxa-naji$^{n}$ of the Wacabe, a Nikaɖaɔna man, and Canugahi of the ¢ixida. As the old men reach the tents of each gens it is announced by some of the spectators, "They have reached the Nuqe!" for example. When Cenaji$^{n}$ arrives at the tents of each gens, he says, "Ho! I have come to you." The pipes are handed in succession to the candidate who sits at the end. Muxa-naji$^{n}$ addresses a few words to each of the candidates who are not the sons of chiefs, but to those who are the sons of chiefs many words are spoken. I belonged to this latter class, so all the old men said to me, "Níɿa ɿ¢ib¢a$^{n}$ taté! I$^{n}$c'áge cí taté! ¢iádi gáhi, ¢iji$^{n}$'¢e gáhi, ¢iɿíga$^{n}$ gáhi, ámustáqti ¢ida$^{n}$'be ma$^{n}$¢i$^{n}$' taí! Wágazuqti ma$^{n}$¢i$^{n}$' ga$^{n}$'¢a-gă." *i. e.*, "You shall have you fill of life! You shall live to be an aged man! Your father was a chief, your elder brother was a chief, and your grandfather was a chief; may they continue to look directly down on you! Desire thou to walk very honestly." At length they say, "Ca$^{n}$," *Enough*! Then the crier proclaims, "Ca$^{n}$' á¢a, u+!" *i. e.*, "It is indeed enough, halloo!" Then all the people walk rapidly to the tent in the middle of the circle, each one trying to get there before the others so as to get a good seat. So they reach there and pass around the tent. At the time of my inauguration I sat at the door of the large tent. Those who had no seats within, (*i. e.*, as chiefs) sat outside. They were addressed thus: "Gí¢iɣa$^{n}$ ité¢a-gă! Égi¢e ĕ'di ¢ag¢i$^{n}$' te hă!" *i.e.*, "Make room! Beware how you sit there!" By and by the two principal chiefs came, stepping very deliberately, and took their places at the head of the circle of those within the large tent.

(2) *Among the Omahas*, as told by La Flèche and Two Crows:

Only one old man goes once around the tribal circle. He starts from his own gens, the Iñke-sabĕ, and enters but a single tent of each gens. He tells the people of that gens to question all their fellow *gentiles* who wish to be chiefs. The old man enters the Weji$^{n}$cte tent last of all. The men of each gens assemble by themselves. Some are afraid to undertake the chieftainship, saying, "It is difficult; I am unwilling." If a candidate is "naxíde-¢iñ'ge," or "wáspajĭ," *i. e.*, *disobedient* or *ill-behaved*, the men of his gens can prevent his acceptance of the office. The next day the chiefs assemble in a large tent. The decorations of the chiefs, the disposition of the sacred pipes and buffalo skull are similar to what happens among the Ponkas, with a few exceptions. The chiefs do not redden their armpits, elbows, and the toes of their moccasins, and the hañga-ɣi'a$^{n}$ze is slightly different.

The only clothing worn by the chiefs during this ceremony consists of moccasins, leggings, breech-cloths, and buffalo robes, with the hair outside. The place of meeting is the earth-lodge belonging to one of the principal chiefs. Besides the chiefs, only a few very brave men are admitted to witness the ceremony and to act as servants. The keepers of the sacred pipes are there; and the two old men of the Haŋga who keep the sacred tents, sit by the door, as the wagɸa, to get wood and water, and to attend to the boiling of the food for the feast. The rest of the people, including the brave men and the young men, are not invited to the feast, but they can sit outside the lodge. When the crier says, "Caⁿ aɸa, u+!" the candidates know that he refers to them, so they and the people hasten to the earth-lodge. (See Fig. 2, § 18.)

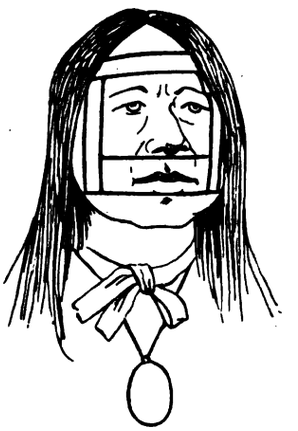

FIG. 42.—The Omaha style of haŋgaɣi'aⁿze.

The brave young men may be selected from each gens to hand around the food; and one of the principal chiefs calls on two by name to lade out the food.

The principal chief who is about to retire tells each new chief where he must sit in the circle of chiefs, and to whatever place he is thus assigned he must regard that as his seat in the assembly from that time on. The seat in question is resigned to the new chief by one of the retiring chiefs, except when some of the subordinate chiefs vacate their places to move nearer to the head chiefs, in which case the new chiefs are told to take the places thus vacated.

When one of the head chiefs resigns all of the subordinate chiefs change their places in the council, moving nearer to the seats of the principal chiefs. But should the principal chiefs so desire it some of the new chiefs may occupy the seats near them, being promoted over some of the subordinates. A new chief did not always succeed a retiring chief of the same gens.

The retiring head chief then exhorts each new chief thus: "If you get in a bad humor Wakanda will do so to you. Do not lie lest the people speak of you as lying chiefs and refuse to obey you."

§ 290. *The tribal assembly or council.*—This is composed of the chiefs alone. The common people have no voice in it. When there is any very important business the young men and all the people are informed of it after the meeting of the council. When the chiefs are thus assembled, they are not always invited to a feast; but the two sacred pipes were always carried around the circle. (See § 18.)

The principal chiefs did not act without consulting the other chiefs. They used to call them together and submit to them any important questions that had arisen, saying first to one then to another, "What

do you decide on?" or "Do you decide what shall be done." If one after another refused to express an opinion, the two principal chiefs continued their questioning till they found one who gave a decision.

§ 291. *The Gentile Assembly.*—A gens could assemble as a whole when there was any special occasion for such action, *e. g.*, if they had any grievance against the members of another gens.

§ 292. *Powers of subordinate Chiefs.*—Chiefs had certain rights, among which were the following: 1. The right to sit in the tribal assembly, and to join in the deliberations. 2. The right of each to retain his office till his death or resignation. 3. The right to regulate the buffalo hunt with the aid of the directors and the keepers of the Hañga sacred tents. 4. The right to approve or disapprove of the organization of a small war party, and to prevent the departure of the same. 5. The right to form a party to go on a friendly visit to another tribe; this includes the right to go with a sacred pipe to the village or camp of a hostile tribe in order to make peace. 6. The right to stop quarreling or fighting between two or more persons, by putting the two sacred pipes between the combatants and begging them to desist. 7. The right to assemble at the sacred tent of the Elk gens, and regulate the sending out of scouts in case of a sudden alarm. 8. In modern times, the chiefs have exercised the right to sell all or a portion of the land occupied by the tribe, to the United States Government; but such a right was, from the nature of the case, unknown in ancient times.

No chief had a right to interfere with the food or other property of private individuals, such as that belonging to the head of a household. So when visitors came from another tribe the chiefs could not compel members of their tribe to entertain them or make presents to them; all they could do was to ask such things of the people as favors. No chief had a right to deprive a hunter of an animal that he had killed, nor could he claim even a part of the animal. (See § 147.)

§ 293. *Powers of principal Chiefs.*—Among their powers are the following: 1. The right to order the policemen to strike the disobedient. 2. The right to order the crier to proclaim the decisions of the tribal assembly. 3. The right to call on two of the brave young men by name, and tell them to lade out the food for the feast. 4. The right to the principal seats in the tribal assembly. 5. The right of one of them to determine the place for each newly-elected chief in the tribal assembly, and also to give any chief a higher place in the circle, promoting him to a place above some of his seniors.

§ 294. *Deposition of Chiefs.*—Chiefs were not deposed. They always continued in office till their deaths or resignations. But when both head chiefs died, or one died and the other resigned, all the subordinate chiefs were obliged to resign.

§ 295. *Powers of the Keepers of the Sacred Tents.*—They had certain duties to perform during the buffalo hunt. They had the care of the sacred tents, with their contents, the pole, and sacred skin. They acted

as wagǫa for the tribal assembly, in which they had seats, but without the right to join in the deliberations. They were expected on such occasions to attend to the fire, to bring in wood and water, and to superintend the boiling of the food for the feast, whenever one was given to the assembly. (See § 8.)

§ 296.—*Powers of the Keepers of the Sacred Pipes* (see Chapter III).—They could not join in the deliberation of the tribal assembly, though no council could be opened without their assistance. (See § 287.)

§ 297. *Powers of the Policemen.*—When not traveling on the buffalo hunt they acted as messengers for the chiefs. There were no special policemen for each chief. They could strike any of the disobedient persons, even when not ordered to do so by the principal chiefs. Such disobedient ones were those who quarreled and fought, stole, or scared off the buffalo.

§ 298. *Religion.*—Religion may be considered as not fully differentiated from the government (see §§ 280 to 283). The chiefs are the religious as well as the civil rulers of the state. A full account of the religion of the Omahas cannot be given in this paper. It is connected with the practice of medicine, mythology, war customs, gentile system, etc.

## CHAPTER XII.

### THE LAW.

§ 299. The law, which is the body of rules that the State endeavors directly or indirectly to enforce, may be properly classed as follows: 1. Personal law. 2. Property law. 3. Corporation law. 4. Government law. 5. International law. 6. Military law. 7. Religious law.

Crimes may be committed against personal law, property law, corporation law, government law, international law, military law, and religious law. So there are as many divisions of criminal law.

### PERSONAL LAW.

§ 300. A large part of personal law belongs to gentile or family law. Certain degrees of consanguinity and affinity are considered as bars to intermarriage. The marriage of kindred has always been regarded as incestuous by the Omahas and kindred tribes. Affinities were forbidden to Self in certain places which are explained in the description of the kinship system and the marriage laws.

Marriage by elopement has been practiced, but marriage by capture or by duel are not known. (See § 82.)

Nage, *quarreling and fighting.*—It used to be a custom among the Omahas, when two men engaged in a fight, that he who gave the first blow was beaten by the native policemen.

T'e¢ai, *accidental killing*, and "t'eki¢ai," *intentional killing* or *murder*, are also crimes against religious law, which see in §§ 310, 311.

*Witchcraft.*—When the supposed victim has died and the offender has been detected his life may be taken by the kinsman of the victim without a trial before the assembly or any other tribunal.

*Slavery* was not known. Captives taken in war were not put to death. (See § 222.)

§ 301. SOCIAL VICES (*a*), *Adultery.*—Sometimes a man steals another man's wife. Sometimes he tempts her, but does not take her from her husband. The injured man may strike or kill the guilty man, he may hit the woman, or he may deprive the offending man of his property. If a woman's husband be guilty of adultery with another woman she may strike him or the guilty female in her anger, but she cannot claim damages. In some extreme cases, as recorded by Say, an inexorable man has been known to tie his frail partner firmly upon the earth in the prairie, and in this situation has she been compelled to submit to

the embraces of twenty or thirty men successively; she is then abandoned. But this never happened when the woman had any immediate kindred, for if she had any such kindred in the tribe the husband would be afraid to punish his wife in that manner. A woman thus punished became an outcast; no one would marry her.

(*b*) *Prostitution.*—In 1879 there were only two or three women in the Omaha tribe that were known as miⁿckeda or public women. Of late years, according to La Flèche and Two Crows, there have been many miⁿckeda, but it was not so formerly, when the Indians were the only inhabitants. A father did not reprove his daughter if she was a miⁿckeda. He left that to her elder brother and her mother's brother, who might strike her with sticks. Sometimes, if very angry with her, they could shoot an arrow at her, and if they killed her, nobody could complain.

(*c*) *Fornication.*—This is not practiced as a rule, except with women or girls that are miⁿckeda. So strict are the Omahas about these matters, that a young girl or even a married women walking or riding alone, would be ruined in character, being liable to be taken for a miⁿckeda, and addressed as such. No woman can ride or walk with any man but her husband or some immediate kinsman. She generally gets some other woman to accompany her, unless her husband goes. Young men are forbidden to speak to girls, if they should meet two or more on the road, unless they are kindred. The writer was told of some immorality after some of the dances in which the women and girls participate. This has occurred recently; and does not apply to all the females present, but only to a few, and that not on all occasions. When girls go to see the dances their mothers accompany them; and husbands go with their wives. After the dance the women are taken home.

(*d*) *Schoopanism*, or *pœdcrastia.*—A man or boy who suffered as a victim of this crime was called a miⁿ-quga, or hermaphrodite. La Flèche and Two Crows say that the miⁿ-quga is "gɸaⁿɸiⁿ," foolish, therefore he acts in that manner.

(*e*) *Rape.*—But one Omaha has a bad reputation in the tribe for having frequently been guilty of this crime. It is said that one day he met the daughter of Giaⁿze-ɸiñge, when she was about a mile from home, driving several ponies. He pulled her off her horse, and though she was not over seven or eight years old, he violated her. The same man was charged with having committed incest with his own mother.

§ 302. *Maiming.*—This never occurs except in two cases: First, by accident, as when two men wrestle, in sport, and an arm is broken by a blow from a bow or stick; secondly, when the policemen hit offenders with their whips, on the head, arms, or body; but this is a punishment and not a crime. La Flèche and Two Crows never heard of teeth being knocked out, noses broken, eyes injured, etc., as among white or colored men.

*Slander* is not punishable, as it is like the wind, being "waniaji," that is, unable to cause pain.

PROPERTY LAW.

§ 303. Public property, provisions, and stock are not known. Hence, there are no revenue laws.

(*a*) *Tribal property.*—Each tribe claimed a certain extent of territory as its own, for purposes of occupancy, cultivation, hunting, and fishing. But the right of a tribe to sell its land was something unheard of. Portions of the Omaha territory were sold because the people feared to refuse the white men. They consented just as a man would "consent" to hand his purse to a highway robber who demanded his money or his life. Land is enduring, even after the death of all of a generation of Omahas; for the men of the next generation succeed and dwell on the land. Land is like water and wind, "wéthiⁿwiⁿ·thi'á-wáthĕ," *what cannot be sold.* But horses, clothing, lodges, etc., soon perish, and these were the only things that they could give away, being personal property. The tribe had a common language, the right to engage together in the chase as well as in war, and in certain rites of a religious and civil character, which are described in connection with the hunting customs, etc.

(*b*) *Gentile property.*—Each gens had its special "wewaspe," such as the sacred pipes, chiefs, sacred tents, area in the tribal circle, etc. These "wewaspe" also belonged, in a measure, to the whole tribe. (See Gentile System, Chapter III.)

(*c*) *Household property.*—This consisted of the right of occupancy of a common dwelling, the right of each person to shares of fish, game, etc., acquired by any member of the household. When game was killed, it belonged solely to the household of the slayer; members of any other household had no right to take any part, but the slayer of a buffalo or other large animal might give portions to those who aided him in cutting it up. (See §§ 147, 159.)

(*d*) *Personal property.*—When a father gave a horse or colt to his child, the latter was the sole owner, and could do what he wished with the property. Each head of a household held a possessory right to such a tract or tracts of land as the members of his family or household cultivated; and as long as the land was thus cultivated, his right to its enjoyment was recognized by the rest of the tribe. But he could not sell his part of the land. He also had a right to cultivate any unoccupied land, and add it to his own. The husband and wife who were at the head of the family or household, were the chief owners of the lodge, robes, etc. They were joint owners, for when the man wished to give away anything that could be spared he could not do so if his wife was unwilling. So, too, if the wife wished to give away what could be spared, she was unable to do it if her husband opposed her. Sometimes, when the man gave something without consulting his wife, and told her afterwards, she said nothing. The wife had control of all the food, and the man consulted her before he invited guests to a feast saying: "Ewéku

ka$^{n}$/b¢a. I$^{n}$wi$^{n}$/hañ-gă." *i. e.*, "I wish to invite them to a feast. Boil for me."

Members of the same tribe occasionally exchanged commodities. This right was recognized by all. (See International Law, § 307.)

§ 304. *Debtors.*—When a man asked another to lend him anything, as a knife, kettle, &c., the owner would not refuse. When the borrower had finished using it, he returned it to the lender, for he would be ashamed to keep it as his own. There never was a case of refusal to return a borrowed article. If the use of the thing had impaired its value, the borrower always returned another article of the same kind, which had to be in as good condition as the former was when it was borrowed. There was no pay or interest on the loan. Sometimes, when the borrower was a kinsman or friend of the lender, and he returned to the latter his property, the lender would say to him, "Keep it!"

§ 305. *Order of inheritance.*—First, the eldest son, who becomes the head of the household or family; then the other sons, who receive shares from their brother; if there are sisters of these, they receive from their eldest brother whatever he thinks that they should have. Should the deceased leave no children, his kindred inherit in the following order: His elder brother, younger brothers, sisters, mothers' brothers, and sisters' sons. The widow receives nothing, unless she has grown sons of her own, who can protect her. The husband's kindred and the widow's step-sons generally deprive her of all the property, because they fear lest she should go elsewhere and marry.

§ 306. *Crime against property law: Theft.*—When the suspected thief did not confess his offense, some of his property was taken from him until he told the truth. When he restored what he had stolen, one-half of his own property was returned to him, and the rest was given to the man from whom he had stolen. Sometimes all of the policemen whipped the thief. But when the thief fled from the tribe, and remained away for a year or two, the offense was not remembered on his return; so no punishment ensued.

## CORPORATION LAW.

(See Societies, in Chapter X.)

## GOVERNMENT LAW.

(See the preceding chapter.) The crimes against government law were violations of the rules of the buffalo hunt, quarreling, and fighting. The violations of the rules of the buffalo hunt were also regarded as crimes against religious law.

## INTERNATIONAL LAW.

(See War Customs, Military Law, and Visiting Customs.)

§ 307. *Mode of making peace with another tribe.*—When the Omahas wished to make peace, which was termed, "making the land good," two or more chiefs and some of the young men took one of the sacred pipes and went unarmed towards the village or camp of the late foe, taking care to go openly and in daylight, when their approach could be seen. They were met by some of the villagers, who conducted them to a lodge, where food was given them. After the meal, they were asked to tell the object of their visit. The leader of the visitors then said, "I have come because I think that we should fight no longer. I have come that we may eat and smoke together." The principal man of the village then replied, "It is good! If you tell the truth, when you come again, we will give a horse to each one of you." At this time, no presents were made by either party. They remained together two, three, or four days, and left for home when their leader decided to depart. The bearer of a peace pipe was generally respected by the enemy, just as the bearer of a flag of truce is regarded by the laws of war among the so-called civilized nations.

When strangers came to visit the Omahas, or when the latter visited another tribe, presents were given by both parties, generally consisting of horses and robes. But there was no commerce, as we understand that term.

## MILITARY LAW.

(See the preceding paragraphs, and War Customs.)

## RELIGIOUS LAW.

§ 308. The rules of the buffalo hunt, the consecration of the hearts and tongues, the ceremonies pertaining to the anointing of the sacred pole, etc., and those connected with the planting of the corn, were customs which were regarded as laws received by their ancestors from Wakanda; hence, they pertained to religion as well as to the government of the tribe. (See §§ 128–163.)

§ 309. The following are of a religious character: The worship of the thunder, when first heard in the spring (§ 24), and when the men go to war (§ 196); the style of wearing the hair in childhood (§ 30, etc.); most of the governmental instrumentalities enumerated in Chapter XI, and non-intercourse with a woman during her catamenial seclusion (§ 97).

The Omahas were afraid to abandon their aged on the prairie when away from their permanent villages lest Wakanda should punish them.

The most common offenses against religious law were murder and accidental killing.

§ 310. *Murder.*—Murder of a fellow Omaha has been of rare occurrence. Drunkenness alone has caused two men to kill each other in a few cases; but owing to it there have been more instances of murder and manslaughter. Before liquor was introduced there were no murders, even when men quarreled. The murder of a fellow clansman was unknown, except in a few cases of parricide, caused by drunkenness. Parents never killed their children. About thirty-two years ago a man killed his uncle to avenge the murder of another uncle by a drunken son. Over sixty years ago a Ponka married an Omaha woman, and remained with her tribe. His mother-in-law was a very bad old woman, so he killed her. No Omaha ever killed an affinity.

Murder might be punished by taking the life of the murderer, or that of one of his clansmen. When one man killed another, the kinsmen of the murdered man wished to avenge his death, but the chiefs and brave men usually interposed. Sometimes they showed one of the sacred pipes; but they always took presents, and begged the kinsmen to let the offender live. Sometimes the kinsmen of the murderer went alone to meet the avengers; sometimes they took with them the chiefs and brave men; sometimes the chiefs, braves, and generous men went without the kinsmen of the murderer. Sometimes the avengers refused to receive the presents, and killed the murderer. Even when one of them was willing to receive them, it was in vain if the others refused.

When the life of the murderer was spared, he was obliged to submit to punishment from two to four years. He must walk barefoot. He could eat no warm food; he could not raise his voice; nor could he look around. He was compelled to pull his robe around him, and to have it tied at the neck, even in warm weather; he could not let it hang loosely or fly open. He could not move his hands about, but was obliged to keep them close to his body. He could not comb his hair; and it must not be blown about by the wind. He was obliged to pitch his tent about a quarter of a mile from the rest of the tribe when they were going on the hunt lest the ghost of his victim should raise a high wind, which might cause damage. Only one of his kindred was allowed to remain with him at his tent. No one wished to eat with him, for they said, "If we eat with him whom Wakanda hates, for his crime, Wakanda will hate us." Sometimes he wandered at night, crying and lamenting his offense. At the end of the designated period, the kindred of the murdered man heard his crying and said, "It is enough. Begone, and walk among the crowd. Put on moccasins and wear a good robe." Should a man get a bad reputation on account of being quarrelsome, his gens might refuse to defend him. Even if the kindred were sad when he

was slain, they would say nothing; and no one tried to avenge him. The murder of a child was as great a crime as the murder of a chief, a brave, or a woman. There was no distinction in the price to be paid.

Should the criminal escape to another tribe, and be absent for a year or two, his crime would be remembered on his return, and he would be in danger.

§ 311. *Accidental killing.*—When one man killed another accidentally, he was rescued by the interposition of the chiefs, and subsequently was punished as if he were a murderer, but only for a year or two.

§ 312. *Profanity.*—Cursing and swearing were unknown before the white men introduced them. Not one of the Ponca dialects contains an oath. The Omahas are very careful not to use names which they regard as sacred on ordinary occasions; and no one dares to sing sacred songs except the chiefs and old men at the proper times.

§ 313. *Drunkenness* became a crime, because it often led to murders; so the Omaha policemen determined to punish each offender. Each one of the ten gave him several blows with a whip, and the drunkard's annuity for that year was taken from him. In 1854 this vice was broken up, and since then there has been no instance of its occurrence among the Omahas.[22]

§ 314. *Falsehood.*—In 1879 Standing Hawk and a few others were noted for this vice; but in 1882 La Flèche said that there were many who had lost all regard for the truth. Formerly, only two or three were notorious liars; but now, there are about twenty who do not lie. Scouts were expected to speak the truth when they returned to report to the directors, the keepers of the sacred tents, etc. (See §§ 23, 136, and 137.) Warriors were obliged to undergo the ordeal of the wastegistu (Osage, watse-ɣistu), before receiving the rewards of bravery. If one told a lie, he was detected, as the Indians believed that the stick always fell from the sacred bag in such a case. (See § 214.)

[22] The Indians also broke up gambling with cards, but it has been resumed, as the police have not the power to punish the offenders.

SMITHSONIAN INSTITUTION—BUREAU OF ETHNOLOGY.

# NAVAJO WEAVERS.

BY

Dr. WASHINGTON MATTHEWS, U. S. A.

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# NAVAJO WEAVERS.

By Dr. Washington Matthews.

§ I. The art of weaving, as it exists among the Navajo Indians of New Mexico and Arizona, possesses points of great interest to the student of ethnography. It is of aboriginal origin; and while European art has undoubtedly modified it, the extent and nature of the foreign influence is easily traced. It is by no means certain, still there are many reasons for supposing, that the Navajos learned their craft from the Pueblo Indians, and that, too, since the advent of the Spaniards; yet the pupils, if such they be, far excel their masters to-day in the beauty and quality of their work. It may be safely stated that with no native tribe in America, north of the Mexican boundary, has the art of weaving been carried to greater perfection than among the Navajos, while with none in the entire continent is it less Europeanized. As in language, habits, and opinions, so in arts, the Navajos have been less influenced than their sedentary neighbors of the pueblos by the civilization of the Old World.

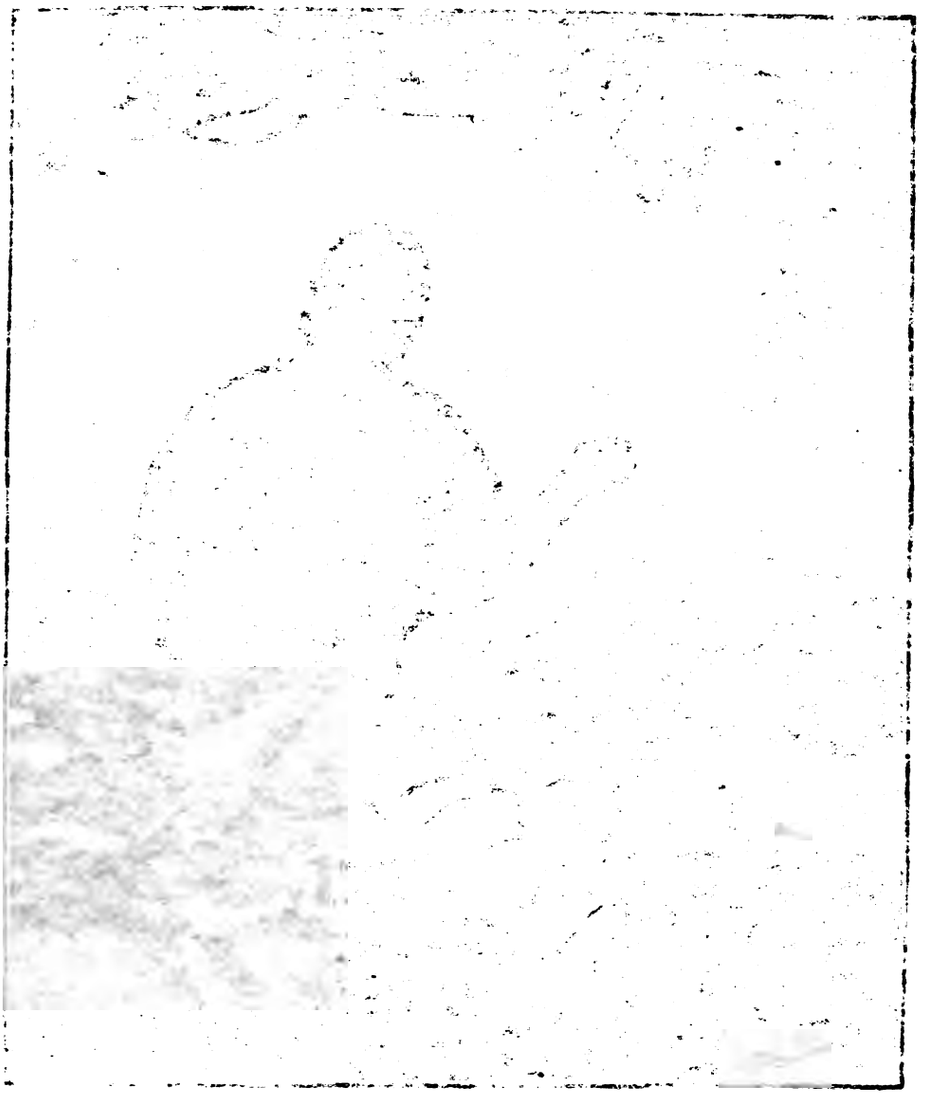
The superiority of the Navajo to the Pueblo work results not only from a constant advance of the weaver's art among the former, but from a constant deterioration of it among the latter. The chief cause of this deterioration is that the Pueblos find it more remunerative to buy, at least the finer *serapes*, from the Navajos, and give their time to other pursuits, than to manufacture for themselves; they are nearer the white settlements and can get better prices for their produce; they give more attention to agriculture; they have within their country, mines of turquoise which the Navajos prize, and they have no trouble in procuring whisky, which some of the Navajos prize even more than gems. Consequently, while the wilder Indian has incentives to improve his art, the more advanced has many temptations to abandon it altogether. In some pueblos the skill of the loom has been almost forgotten. A growing fondness for European clothing has also had its influence, no doubt.

§ II. Cotton, which grows well in New Mexico and Arizona, the tough fibers of yucca leaves and the fibers of other plants, the hair of different quadrupeds, and the down of birds furnished in prehistoric days the materials of textile fabrics in this country. While some of the Pueblos still weave their native cotton to a slight extent, the Navajos grow no cotton and spin nothing but the wool of the domestic sheep, which animal is, of course, of Spanish introduction, and of which the Navajos have vast herds.

The wool is not washed until it is sheared. At the present time it is combed with hand cards purchased from the Americans. In spinning, the simplest form of the spindle—a slender stick thrust through the center of a round wooden disk—is used. The Mexicans on the Rio Grande use spinning-wheels, and although the Navajos have often seen these wheels, have had abundant opportunities for buying and stealing them, and possess, I think, sufficient ingenuity to make them, they have never abandoned the rude implement of their ancestors. Plate XXXIV illustrates the Navajo method of handling the spindle, a method different from that of the people of Zuñi.

They still employ to a great extent their native dyes: of yellow, reddish, and black. There is good evidence that they formerly had a blue dye; but indigo, originally introduced, I think, by the Mexicans, has superseded this. If they, in former days, had a native blue and a native yellow, they must also, of course, have had a green, and they now make green of their native yellow and indigo, the latter being the only imported dye-stuff I have ever seen in use among them. Besides the hues above indicated, this people have had, ever since the introduction of sheep, wool of three different natural colors—white, rusty black, and gray—so they had always a fair range of tints with which to execute their artistic designs. The brilliant red figures in their finer blankets were, a few years ago, made entirely of *bayeta*, and this material is still largely used. Bayeta is a bright scarlet cloth with a long nap, much finer in appearance than the scarlet strouding which forms such an important article in the Indian trade of the North. It was originally brought to the Navajo country from Mexico, but is now supplied to the trade from our eastern cities. The Indians ravel it and use the weft. While many handsome blankets are still made only of the colors and material above described, American yarn has lately become very popular among the Navajos, and many fine blankets are now made wholly, or in part, of Germantown wool.

The black dye mentioned above is made of the twigs and leaves of the aromatic sumac (*Rhus aromatica*), a native yellow ocher, and the gum of the piñon (*Pinus edulis*). The process of preparing it is as follows: They put into a pot of water some of the leaves of the sumac, and as many of the branchlets as can be crowded in without much breaking or crushing, and the water is allowed to boil for five or six hours until a strong decoction is made. While the water is boiling they attend to other parts of the process. The ocher is reduced to a fine powder between two stones and then slowly roasted over the fire in an earthen or metal vessel until it assumes a light-brown color; it is then taken from the fire and combined with about an equal quantity in size of piñon gum; again the mixture is put on the fire and constantly stirred. At first the gum melts and the whole mass assumes a mushy consistency; but as the roasting progresses it gradually becomes drier and darker until it is at last reduced to a fine black powder. This is removed from the



NAVAJO WOMAN SPINNING.

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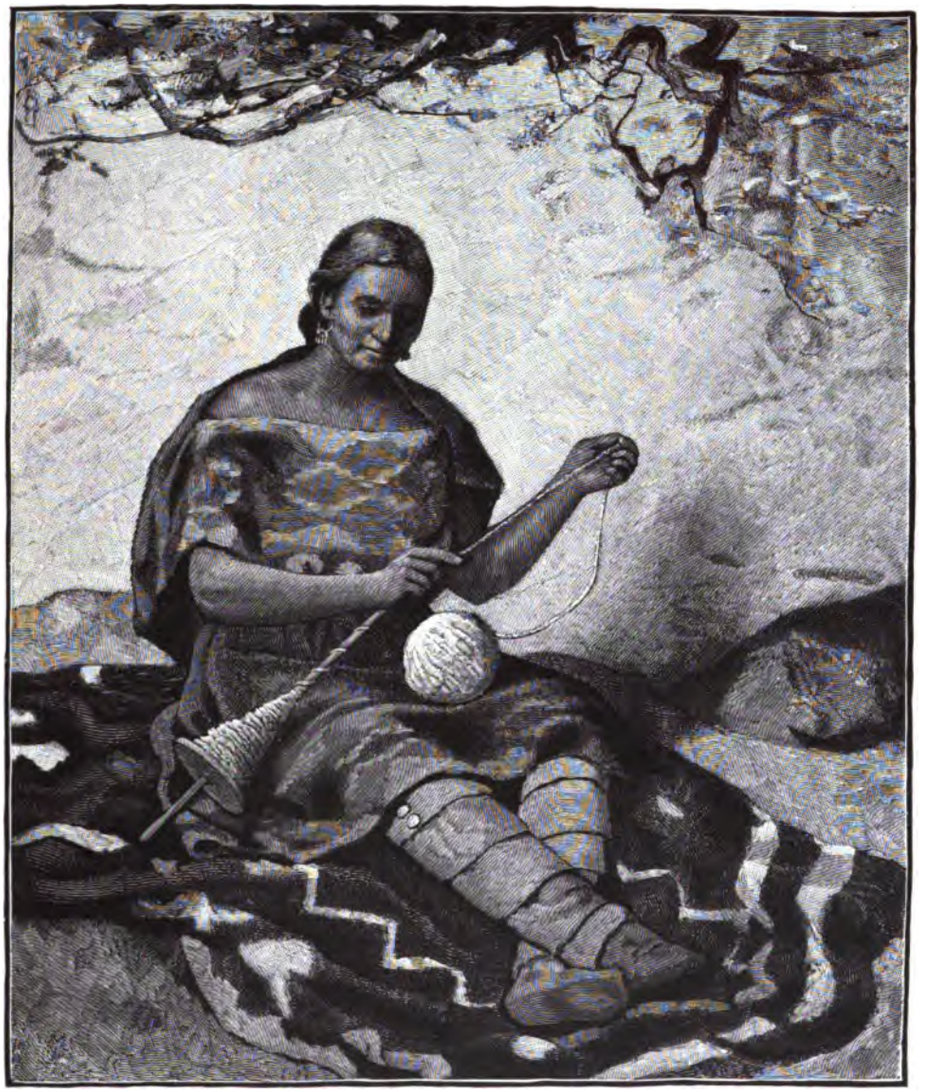

NAVAJO WOMAN SPINNING.

fire, and when it has cooled somewhat it is thrown into the decoction of sumac, with which it instantly forms a rich, blue-black fluid. This dye is essentially an ink, the tannic acid of the sumac combining with the sesquioxide of iron in the roasted ocher, the whole enriched by the carbon of the calcined gum.

There are, the Indians tell me, three different processes for dyeing yellow; two of these I have witnessed. The first process is thus conducted: The flowering tops of *Bigelovia graveolens* are boiled for about six hours until a decoction of deep yellow color is produced. When the dyer thinks the decoction strong enough, she heats over the fire in a pan or earthen vessel some native almogen (an impure native alum), until it is reduced to a somewhat pasty consistency; this she adds gradually to the decoction and then puts the wool in the dye to boil. From time to time a portion of the wool is taken out and inspected until (in about half an hour from the time it is first immersed) it is seen to have assumed the proper color. The work is then done. The tint produced is nearly that of lemon yellow. In the second process they use the large, fleshy root of a plant which, as I have never yet seen it in fruit or flower, I am unable to determine. The fresh root is crushed to a soft paste on the *metate*, and, for a mordant, the almogen is added while the grinding is going on. The cold paste is then rubbed between the hands into the wool. If the wool does not seem to take the color readily a little water is dashed on the mixture of wool and paste, and the whole is very slightly warmed. The entire process does not occupy over an hour and the result is a color much like that now known as "old gold."

The reddish dye is made of the bark of *Alnus incana* var. *virescens* (Watson) and the bark of the root of *Cercocarpus parvifolius;* the mordant being fine juniper ashes. On buckskin this makes a brilliant tan-color; but applied to wool it produces a much paler tint.

§ III. Plate XXXVIII and Fig. 42 illustrate ordinary blanket-looms. Two posts, *a a*, are set firmly in the ground; to these are lashed two cross-pieces or braces, *b c*, the whole forming the frame of the loom. Sometimes two slender trees, growing at a convenient distance from one another, are made to answer for the posts. *d* is a horizontal pole, which I call the supplementary yarn-beam, attached to the upper brace, *b*, by means of a rope, *e e*, spirally applied. *f* is the upper beam of the loom. As it is analogous to the yarn-beam of our looms, I will call it by this name, although once only have I seen the warp wound around it. It lies parallel to the pole *d*, about 2 or 3 inches below it, and is attached to the latter by a number of loops, *g g*. A spiral cord wound around the yarn-beam holds the upper border cord *h h*, which, in turn, secures the upper end of the warp *i i*. The lower beam of the loom is shown at *k*. I will call this the cloth-beam, although the finished web is never wound around it; it is tied firmly to the lower brace, *c*, of the frame, and to it is secured the lower border cord of the blanket. The original distance between the two beams is the length of the blanket. Lying

between the threads of the warp is depicted a broad, thin, oaken stick, *l*, which I will call the batten. A set of healds attached to a heald-

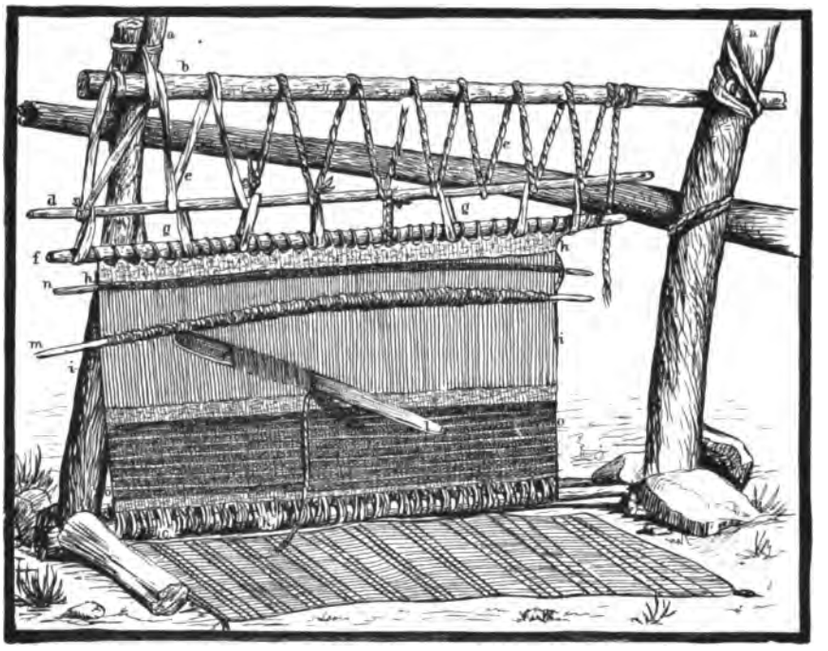

FIG. 42.—Ordinary Navajo blanket loom.

rod, *m*, are shown above the batten. These healds are made of cord or yarn; they include alternate threads of the warp, and serve when drawn forward to open the lower shed. The upper shed is kept patent by a stout rod, *n* (having no healds attached), which I name the shed-rod. Their substitute for the reed of our looms is a wooden fork, which will be designated as the reed-fork (Fig. 44, *a*).

For convenience of description, I am obliged to use the word "shuttle," although, strictly speaking, the Navajo has no shuttle. If the figure to be woven is a long stripe, or one where the weft must be passed through 6 inches or more of the shed at one time, the yarn is wound on a slender twig or splinter, or shoved through on the end of such a piece of wood; but where the pattern is intricate, and the weft passes at each turn through only a few inches of the shed, the yarn is wound into small skeins or balls and shoved through with the finger.

§ IV. The warp is thus constructed: A frame of four sticks is made, not unlike the frame of the loom, but lying on or near the ground, instead of standing erect. The two sticks forming the sides of the frame are rough saplings or rails; the two forming the top and bottom are smooth rounded poles—often the poles which afterwards serve as the beams of the loom; these are placed parallel to one another, their distance apart depending on the length of the projected blanket.

On these poles the warp is laid in a continuous string. It is first firmly tied to one of the poles, which I will call No. 1 (Fig. 43); then it is passed over the other pole, No. 2, brought back under No. 2 and over No. 1, forward again under No. 1 and over No. 2, and so on to the end. Thus the first, third, fifth, &c., turns of the cord cross in the middle the second, fourth, sixth, &c., forming a series of elongated figures 8, as shown in the following diagram—

FIG. 43.—Diagram showing formation of warp.

and making, in the very beginning of the process, the two sheds, which are kept distinct throughout the whole work. When sufficient string has been laid the end is tied to pole No. 2, and a rod is placed in each shed to keep it open, the rods being afterwards tied together at the ends to prevent them from falling out.

This done, the weaver takes three strings (which are afterwards twilled into one, as will appear) and ties them together at one end. She now sits outside of one of the poles, looking toward the center of the frame, and proceeds thus: (1) She secures the triple cord to the pole immediately to the left of the warp; (2) then she takes one of the threads (or strands as they now become) and passes it under the first turn of the warp; (3) next she takes a second strand, and twilling it once or oftener with the other strands, includes with it the second bend of the warp; (4) this done, she takes the third strand and, twilling it as before, passes it under the third bend of the warp, and thus she goes on until the entire warp in one place is secured between the strands of the cord; (5) then she pulls the string to its fullest extent, and in doing so separates the threads of the warp from one another; (6) a similar three stranded cord is applied to the other end of the warp, along the outside of the other pole.

At this stage of the work these stout cords lie along the outer surfaces of the poles, parallel with the axes of the latter, but when the warp is taken off the poles and applied to the beams of the loom by the spiral thread, as above described, and as depicted in Plate XXXVIII and Fig. 42, and all is ready for weaving, the cords appear on the inner sides of the beams, *i. e.*, one (Pl. XXXVIII and Fig. 42, *h h*) at the lower side of the yarn-beam, the other at the upper side of the cloth-beam, and when the blanket is finished they form the stout end margins of the web. In the coarser grade of blankets the cords are removed and the ends of the warp tied in pairs and made to form a fringe. (See Figs. 54 and 55.)

When the warp is transferred to the loom the rod which was placed in the upper shed remains there, or another rod, straighter and smoother,

[illegible] At the present time it [illegible] the Americans. In spinning [illegible] stick thrust through the [illegible] The Mexicans on the [illegible] Navajos have often see[illegible] for buying and stealing [illegible] to make them, they [illegible] tors. [illegible] the spindle, a method [illegible]

[illegible] dyes: of yellow, [illegible] formerly had a [illegible] by the Mexicans, [illegible] days, had a native blue [illegible] have had a green, and they now [illegible] indigo, the latter being the [illegible] among them. Besides the [illegible] since the introduction of [illegible] white, rusty black [illegible] a fair range of tints with which to [illegible] The brilliant red figures in their finer [illegible] made entirely of *bayeta*, and this material [illegible] used. Bayeta is a bright scarlet cloth with a long [illegible] than the scarlet strouding [illegible] in the Indian trade of the North. It was [illegible] to the Navajo country from Mexico, but is now supplied [illegible] from our eastern cities. The Indians [illegible] many handsome blankets [illegible] still made only of the [illegible] described. American yarn has lately become very [illegible] the Navajos, and many the blankets are now made wholly [illegible] wool.

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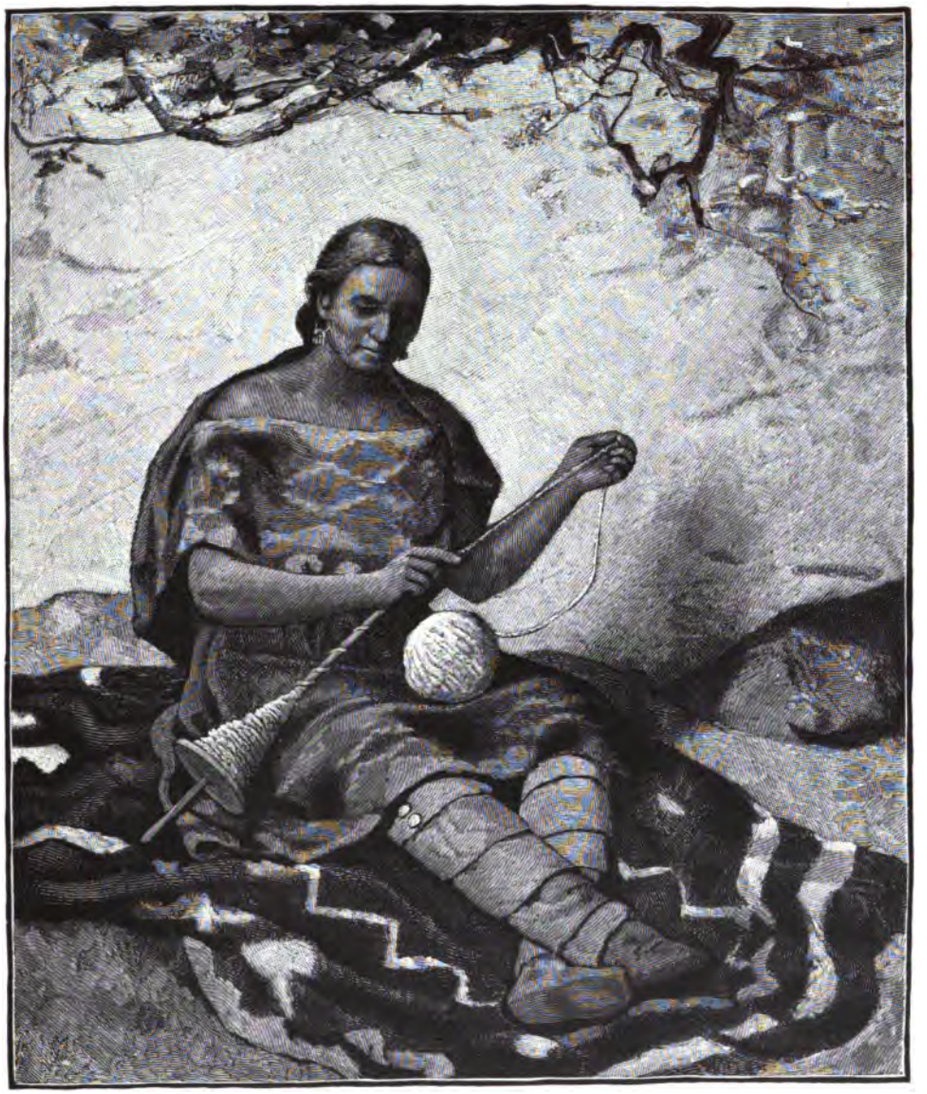


NAVAJO WOMAN SPINNING.

Suppose the woman begins by weaving in the lower shed. She draws a portion of the healds towards her, and with them the anterior threads of the shed; by this motion she opens the shed about 1 inch, which is not sufficient for the easy passage of the woof. She inserts her batten edgewise into this opening and then turns it half around on its long axis, so that its broad surfaces lie horizontally; in this way the shed is opened to the extent of the width of the batten—about 3 inches; next the weft is passed through. In fig. 42 the batten is shown lying edgewise (its broad surfaces vertical), as it appears when just inserted into the shed, and the weft, which has been passed through only a portion of the shed, is seen hanging out with its end on the ground. In Plate XXXV the batten is shown in the second position described, with the shed open to the fullest extent necessary, and the weaver is represented in the act of passing the shuttle through. When the weft is in, it is shoved down into its proper position by means of the reed-fork, and then the batten, restored to its first position (edgewise), is brought down with firm blows on the weft. It is by the vigorous use of the batten that the Navajo serapes are rendered water-proof. In Plate XXXVIII the weaver is seen bringing down this instrument "in the manner and for the purpose described," as the letters patent say.

When the lower shed has received its thread of weft the weaver opens the upper shed. This is done by releasing the healds and shoving the shed-rod down until it comes in contact with the healds; this opens the upper shed down to the web. Then the weft is inserted and the batten and reed-fork used as before. Thus she goes on with each shed alternately until the web is finished.

It is, of course, desirable, at least in handsome blankets of intricate pattern, to have both ends uniform even if the figure be a little faulty in the center. To accomplish this some of the best weavers depend on a careful estimate of the length of each figure before they begin, and weave continuously in one direction; but the majority weave a little portion of the upper end before they finish the middle. Sometimes this is done by weaving from above downwards; at other times it is done by turning the loom upside down and working from below upwards in the ordinary manner. In Fig. 49, which represents one of the very finest results of Navajo work, by the best weaver in the tribe, it will be seen that exact uniformity in the ends has not been attained. The figure was of such a nature that the blanket had to be woven in one direction only.

I have described how the ends of the blanket are bordered with a stout three-ply string applied to the folds of the warp. The lateral edges of the blanket are similarly protected by stout cords applied to the weft. The way in which these are woven in, next demands our attention. Two stout worsted cords, tied together, are firmly attached at each end of the cloth-beam just outside of the warp; they are then carried upwards and loosely tied to the yarn-beam or the supplementary

yarn-beam. Every time the weft is turned at the edge these two strings are twisted together and the weft is passed through the twist; thus one thread or strand of this border is always on the outside. As it is constantly twisted in one direction, it is evident that, after a while, a counter-twist must form which would render the passage of the weft between the cords difficult, if the cords could not be untwisted again. Here the object of tying these cords loosely to one of the upper beams, as before described, is displayed. From time to time the cords are untied and the unwoven portion straightened as the work progresses. Fig. 44 and Plate XXXVIII show these cords. The coarse blankets do not have them. (Fig 42.)

Navajo blankets are single-ply, with designs the same on both sides, no matter how elaborate these designs may be. To produce their varigated patterns they have a separate skein, shuttle, or thread for each component of the pattern. Take, for instance, the blanket depicted in Fig. 49. Across this blanket, between the points *a*—*b*, we have two serrated borders, two white spaces, a small diamond in the center, and twenty-four serrated stripes, making in all twenty-nine component parts of the pattern. Now, when the weaver was working in this place, twenty-nine different threads of weft might have been seen hanging from the face of the web at one time. In the girth pictured in Fig. 44 five different threads of woof are shown depending from the loom.

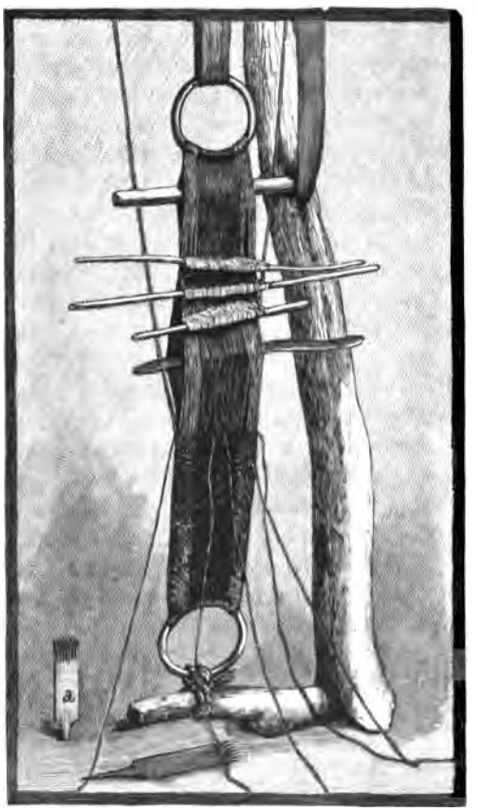


FIG. 44.—Weaving of saddle-girth.

When the web is so nearly finished that the batten can no longer be inserted in the warp, slender rods are placed in the shed, while the weft is passed with increased difficulty on the end of a delicate splinter and the reed-fork alone presses the warp home. Later it becomes necessary to remove even the rod and the shed; then the alternate threads are separated by a slender stick worked in tediously between them, and two threads of woof are

inserted—one above and the other below the stick. The very last thread is sometimes put in with a darning needle. The weaving of the last three inches requires more labor than any foot of the previous work.

In Figs. 49, 50, 51, 52, and 53 it will be seen that there are small fringes or tassels at the corners of the blankets; these are made of the redundant ends of the four border-cords (*i. e.*, the portions of the cord by which they were tied to the beams), either simply tied together or secured in the web with a few stitches.

The above is a description of the simplest mechanism by which the Navajos make their blankets; but in manufacturing diagonals, sashes, garters, and hair-bands the mechanism is much more complicated.

§ VII. For making diagonals the warp is divided into four sheds; the uppermost one of these is provided with a shed-rod, the others are supplied with healds. I will number the healds and sheds from below upwards. The following diagram shows how the threads of the warp are arranged in the healds and on the rod.

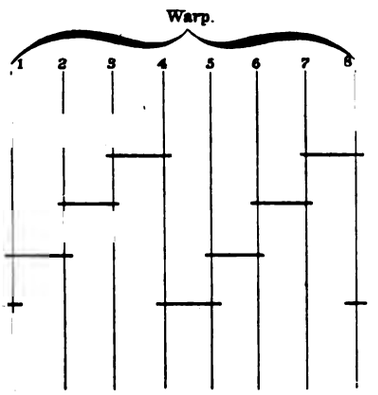



FIG. 45.—Diagram showing arrangement of threads of the warp in the healds and on the rod.

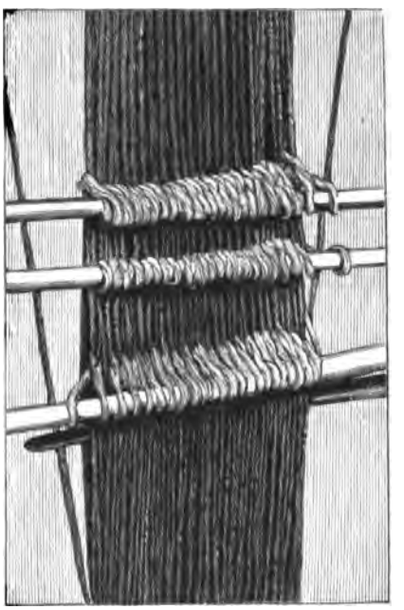


FIG. 46.—Weaving of saddle-girth.

When the weaver wishes the diagonal ridges to run upwards from right to left, she opens the sheds in regular order from below upwards thus: First, second, third, fourth, first, second, third, fourth, &c. When she wishes the ridges to trend in the contrary direction she opens the sheds in the inverse order. I found it convenient to take my illustrations of this mode of weaving from a girth. In Figs. 44 and 46 the mechanism is plainly shown. The lowest (first) shed is opened and the first set of healds drawn forward. The rings of the girth take the place of the beams of the loom.

There is a variety of diagonal weaving practiced by the Navajos which produces diamond figures; for this the mechanism is the same

as that just described, except that the healds are arranged differently on the warp. The following diagram will explain this arrangement.

To make the most approved series of diamonds the sheds are opened twice in the direct order (*i. e.*, from below upwards) and twice in the

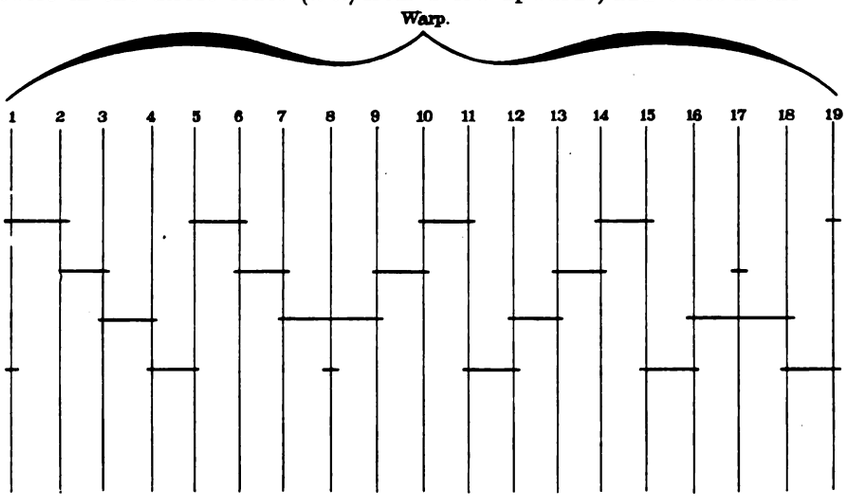



FIG. 47.—Diagram showing arrangement of helds in diagonal weaving.

inverse order, thus: First, second, third, fourth, first, second, third, fourth, third, second, first, fourth, third, second, first, fourth, and so on. If this order is departed from the figures become irregular. If the weaver continues more than twice consecutively in either order, a row

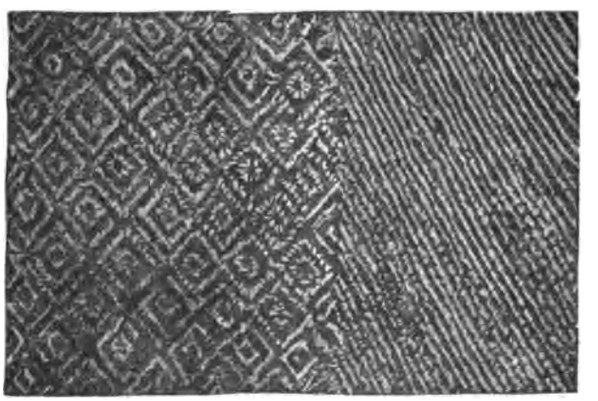
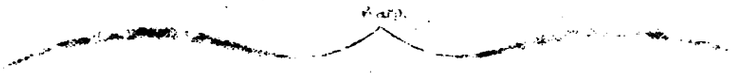


FIG. 48.—Diagonal cloth.

of V-shaped figures is formed, thus: VVVV. Plate XXXV represents a woman weaving a blanket of this pattern, and Fig. 48 shows a portion of a blanket which is part plain diagonal and part diamond.

§ VIII. I have heretofore spoken of the Navajo weavers always as of the feminine gender because the large majority of them are women.

NAVAJO WOMAN WEAVING A BLA...



NAVAJO WOMAN WEAVING A BELT.

There are, however, a few men who practice the textile art, and among them are to found the best artisans in the tribe.

§ IX. Navajo blankets represent a wide range in quality and finish and an endless variety in design, notwithstanding that all their figures consist of straight lines and angles, no curves being used. As illustrating the great fertility of this people in design I have to relate that in the finer blankets of intricate pattern out of thousands which I have examined, I do not remember to have ever seen two exactly alike. Among the coarse striped blankets there is great uniformity.

FIG. 49.—Navajo blanket of the finest quality.

The accompanying pictures of blankets represent some in my private collection. Fig. 49 depicts a blanket measuring 6 feet 9 inches by 5 feet 6 inches, and weighing nearly 6 pounds. It is made entirely of Germantown yarn in seven strongly contrasting colors, and is the work of a man who is generally conceded to be the best weaver in the tribe. A month was spent in its manufacture. Its figures are mostly in serrated stripes, which are the most difficult to execute with regularity. I have heard that the man who wove this often draws his designs on sand before he begins to work them on the loom. Fig. 50 *a* shows a

blanket of more antique design and material. It is 6 feet 6 inches by 5 feet 3 inches, and is made of native yarn and *bayeta*. Its colors are

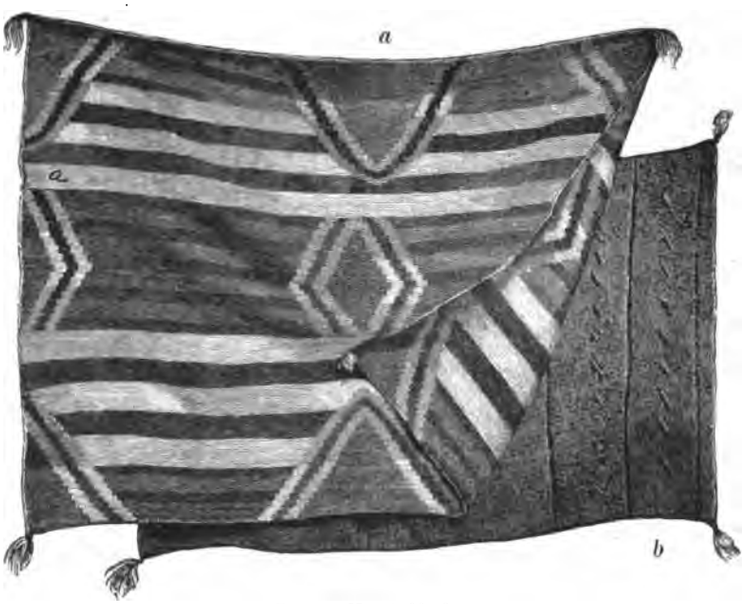



FIG. 50.—Navajo blankets.

black, white, dark-blue, red (*bayeta*) and—in a portion of the stair-like figures—a pale blue. Fig. 50 *b* depicts a tufted blanket or rug, of a kind not common, having much the appearance of an Oriental rug; it

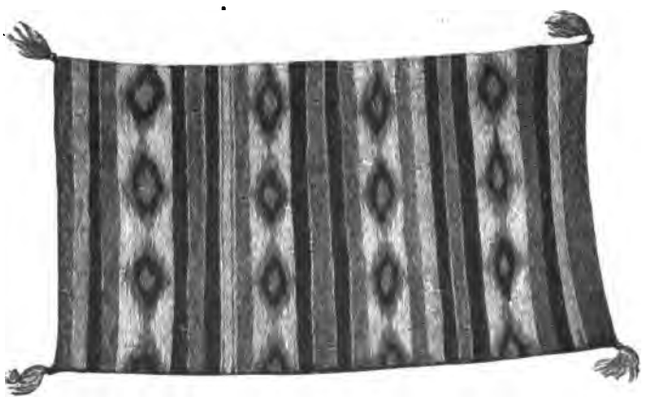


FIG. 51.—Navajo blanket.

is made of shredded red flannel, with a few simple figures in yellow, dark blue, and green. Fig. 51 represents a gaudy blanket of smaller size (5 feet 4 inches by 3 feet 7 inches) worn by a woman. Its colors are

yellow, green, dark blue, gray, and red, all but the latter color being in native yarn. Figs. 52 and 53 illustrate small or half-size blankets made for children's wear. Such articles are often used for saddle

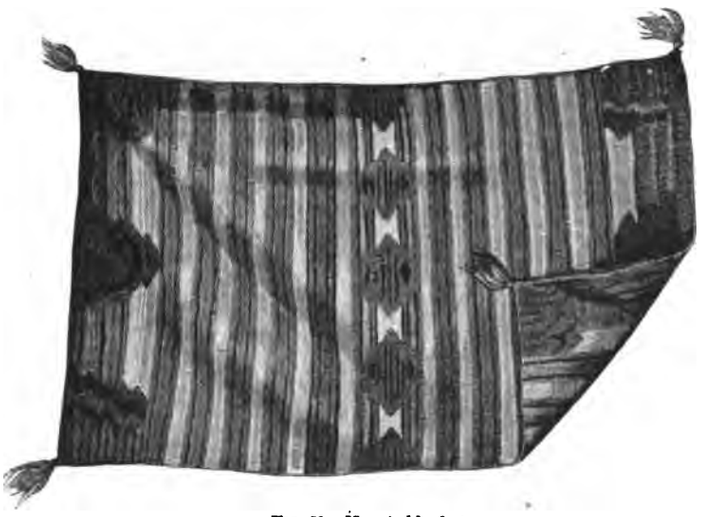


FIG. 52.—Navajo blanket.

blankets (although the saddle-cloth is usually of coarser material) and are in great demand among the Americans for rugs. Fig. 53 has a regular border of uniform device all the way around—a very rare thing

FIG. 53.—Navajo blanket.

in Navajo blankets. Figs. 54 and 55 show portions of coarse blankets made more for use use than ornament. Fig. 55 is made of loosely-twilled yarn, and is very warm but not water-proof. Such blankets

make excellent bedding for troops in the field. Fig. 54 is a water-proof *serape* of well-twilled native wool.

The aboriginal woman's dress is made of two small blankets, equal

FIG. 54.—Part of Navajo blanket.

in size and similar in design, sewed together at the sides, with apertures left for the arms and no sleeves. It is invariably woven in black

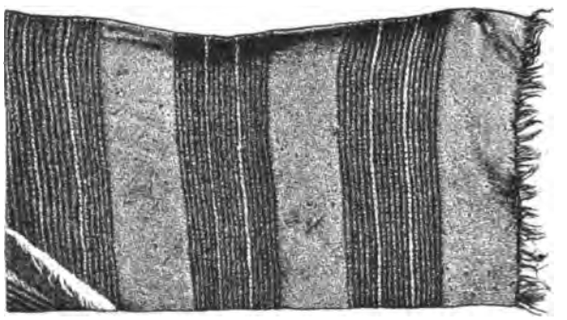


FIG. 55.—Part of Navajo blanket.

or dark-blue native wool with a broad variegated stripe in red imported yarn or red *bayeta* at each end, the designs being of countless

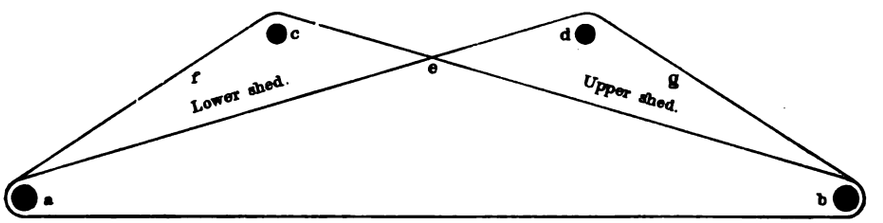



FIG. 56.—Diagram showing formation of warp of sash.

variety. Plates XXXIV and XXXV represent women wearing such dresses.

[illegible] WEAVERS.

[illegible] for troops in the field. Fig. 54 is a wa[illegible] [illegible] wood.

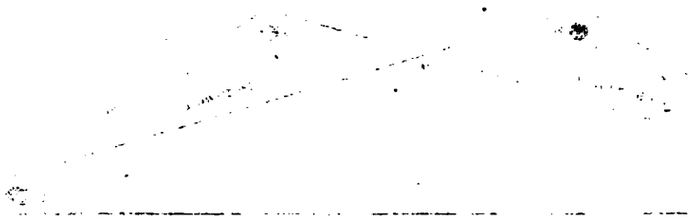
[illegible] dress is made of two small blankets, [illegible]

[illegible]

[illegible] together at the side [illegible] It is [illegible]

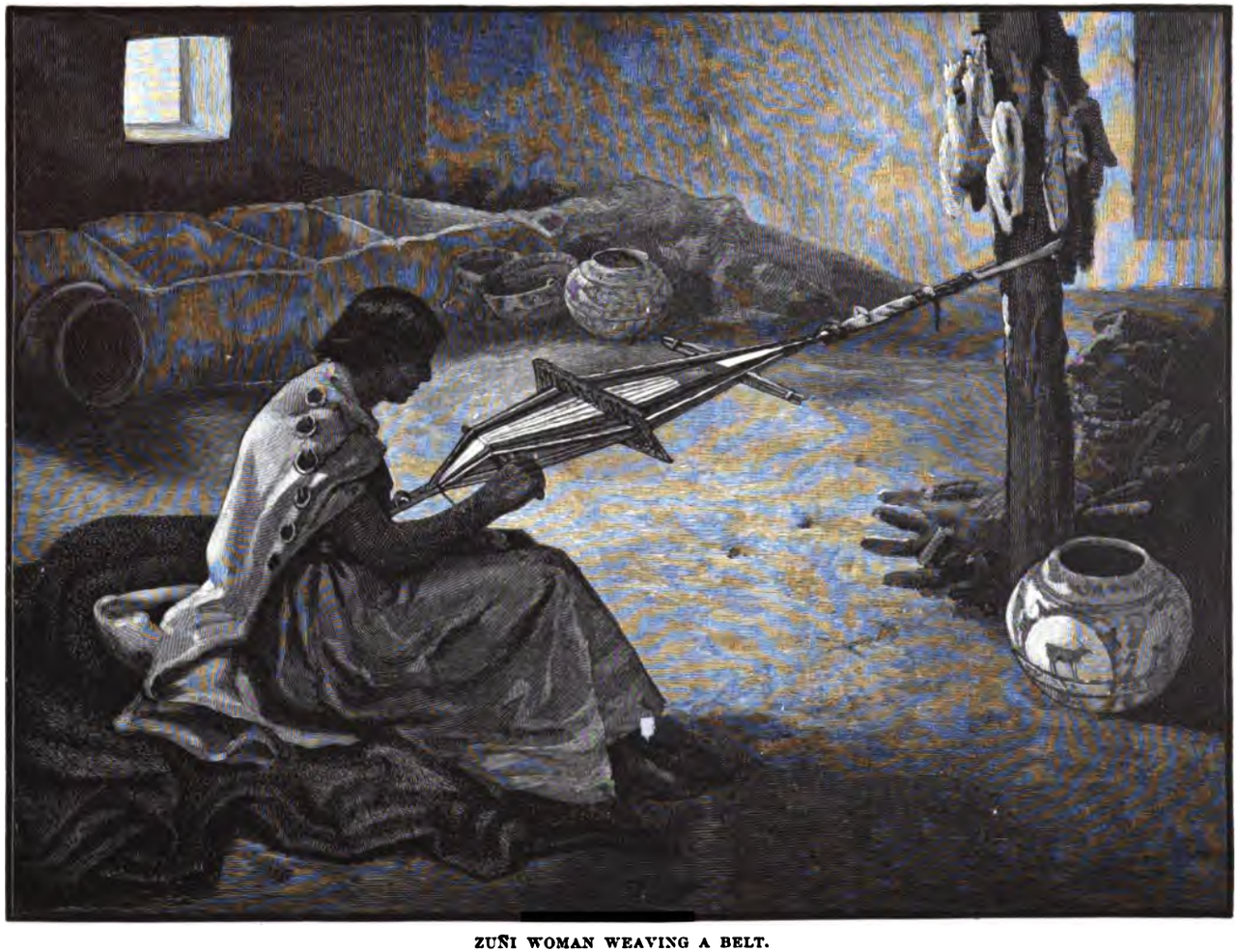
[illegible]

[illegible]



[illegible]

[illegible] dresses.



ZUÑI WOMAN WEAVING A BELT.

§ X. Their way of weaving long ribbon-like articles, such as sashes or belts, garters, and hair-bands, which we will next consider, presents many interesting variations from the method pursued in making blankets. To form a sash the weaver proceeds as follows: She drives into the ground four sticks and on them she winds her warp as a continuous string

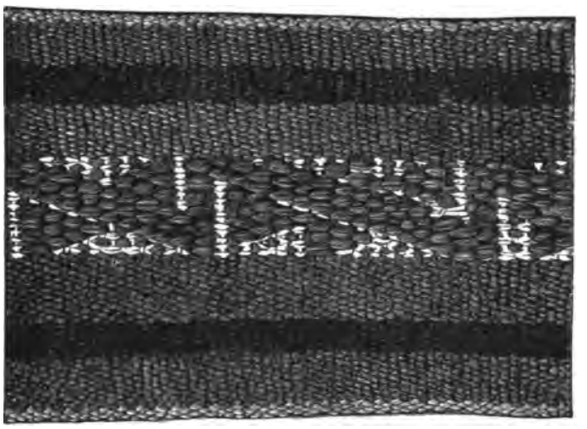


FIG. 57.—Section of Navajo belt.

(however, as the warp usually consists of threads of three different colors it is not always *one* continuous string) from below upwards in such a way as to secure two sheds, as shown in the diagram, Fig. 56.

Every turn of the warp passes over the sticks *a* and *b*; but it is alternate turns that pass over *c* and *d*. When the warp is laid she ties a

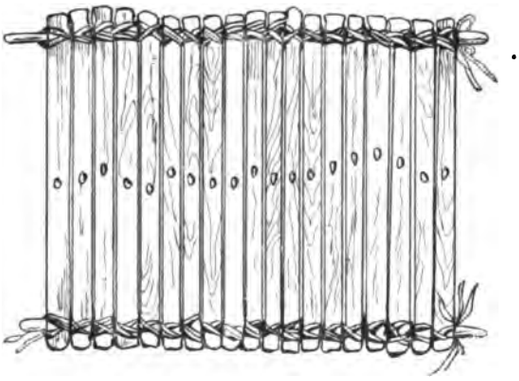


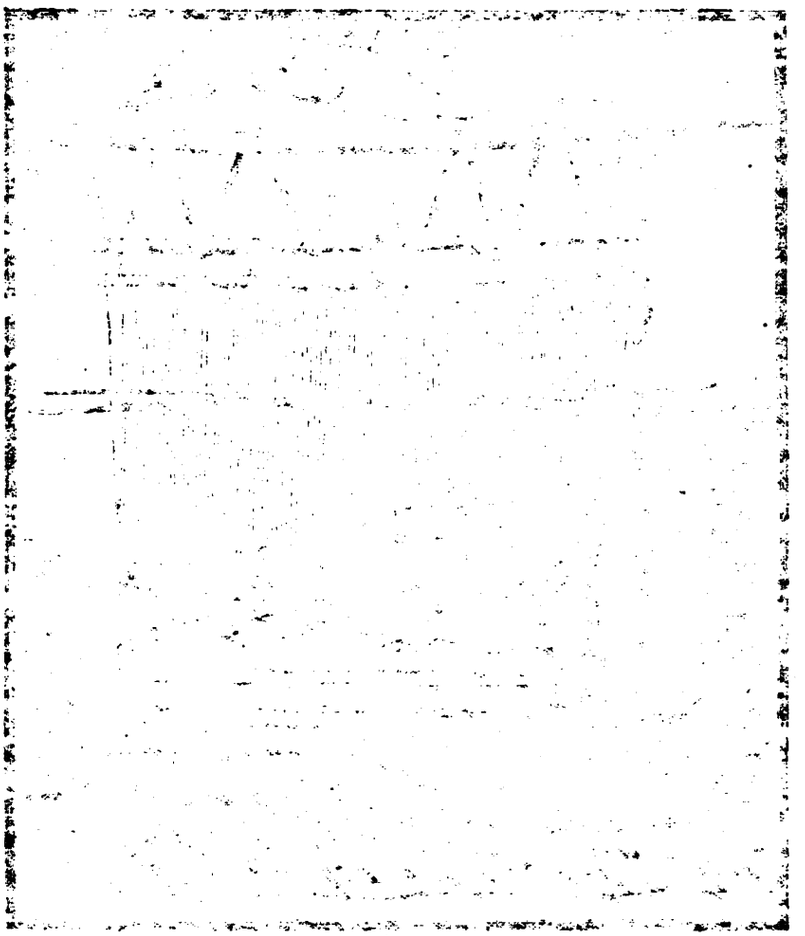
FIG. 58.—Wooden heald of the Zuñis.

string around the intersection of the sheds at *e*, so as to keep the sheds separate while she is mounting the warp on the beams. She then places the upper beam of the loom in the place of the stick *b* and the lower beam in the place of the stick *a*. Sometimes the upper and lower beams are secured to the two side rails forming a frame such as the warp of a

blanket is wound on (§ IV), but more commonly the loom is arranged in the manner shown in Plate XXXVI; that is, the upper beam is secured to a rafter, post, or tree, while to the lower beam is attached a loop of rope that passes under the thighs of the weaver, and the warp is rendered tense by her weight. Next, the upper shed is supplied with a shed-rod and the lower shed with a set of healds. Then the stick at *f* (upper stick in Plate XXXVI) is put in; this is simply a round stick, about which one loop of each thread of the warp is thrown. (Although the warp may consist of only one thread I must now speak of each turn as a separate thread.) Its use is to keep the different threads in place and prevent them from crossing and straggling; for it must be remembered that the warp in this case is not secured at two points between three stranded cords as is the blanket warp.

When this is all ready the insertion of the weft begins. The reed-fork is rarely needed and the batten used is much shorter than that employed in making blankets. Fig. 57 represents a section of a belt. It will be seen that the center is ornamented with peculiar raised figures; these are made by inserting a slender stick into the warp, so as to hold up certain of the threads while the weft is passed twice or oftener underneath them. It is practically a variety of damask or two-ply weaving; the figures on the opposite side of the belt being different. There is a limited variety of these figures. I think I have seen about a dozen different kinds. The experienced weaver is so well acquainted with the "count" or arrangements of the raised threads appropriate to each pattern that she goes on inserting and withdrawing the slender stick referred to without a moment's hesitation, making the web at the rate of 10 or 12 inches an hour. When the web has grown to the point at which she cannot weave it further without bringing the unfilled warp nearer to her, she is not obliged to resort to the clumsy method used with blankets. She merely seizes the anterior layer of the warp and pulls it down towards her; for the warp is not attached to the beams, but is movable on them; in other words, while still on the loom the belt is endless. When all the warp has been filled except about one foot, the weaving is completed; for then the unfilled warp is cut in the center and becomes the terminal fringes of the now finished belt.

The only marked difference that I have observed between the mechanical appliances of the Navajo weaver and those of her Pueblo neighbor is to be seen in the belt loom. The Zuñi woman lays out her warp, not as a continuous thread around two beams, but as several disunited threads. She attaches one end of these to a fixed object, usually a rafter in her dwelling, and the other to the belt she wears around her body. She has a set of wooden healds by which she actuates the alternate threads of the warp. Instead of using the slender stick of the Navajos to elevate the threads of the warp in forming her figures, she lifts these threads with her fingers. This is an easy matter with her



[illegible]ING DOWN THE BATTEN.

[illegible] (Fig. [illegible]IV), but more co[illegible] [illegible] Plate XXXVI [illegible], the [illegible] to [illegible] lower beam [illegible] the fingers of the weaver [illegible] upper [illegible] XXXVI [illegible] thread [illegible] crossing and [illegible] that the warp in this case is not secured at stranded cord [illegible] as is the [illegible].

When this is all ready the [illegible] of [illegible] fork [illegible] used as [illegible] in making blankets. [illegible] It will be seen [illegible] the center is [illegible] these are [illegible] to hold up [illegible] which [illegible] opposite [illegible]. There is a [illegible] of [illegible] about a dozen [illegible]. The [illegible] quainted with the [illegible] arrangement [illegible] priate to each pattern that she goes on [illegible] slender stick referred to without [illegible] web at the rate of 10 or [illegible] inches an [illegible] grown to the point at which [illegible] ing the unfilled warp [illegible], she [illegible] clumsy method used with blankets. She [illegible] of the warp and [illegible] towards [illegible] still on the [illegible] except about [illegible] warp is cut in [illegible] the [illegible] finished belt.

The only marked [illegible] chanical applian[illegible] neighbor is to be seen in [illegible]. The warp, not as [illegible] two [illegible] these [illegible] the belt body. She has [illegible] by which [illegible] the [illegible] of [illegible] Navajos [illegible] these there is [illegible]

BRINGING DOWN THE BATTEN.

style of loom; but it would be a very difficult task with that of the Navajos. Plate XXXVII represents a Zuñi woman weaving a belt. The wooden healds are shown, and again, enlarged, in Fig. 58. The Zuñi women weave all their long, narrow webs according to the same system; but Mr. Bandelier has informed me that the Indians of the Pueblo of Cochiti make the narrow garters and hair-bands after the manner of the Zuñis, and the broad belts after the manner of the Navajos.

§ XI. I will close by inviting the reader to compare Plate XXXVI and Fig. 59. The former shows a Navajo woman weaving a belt; the

FIG. 59.—Girl weaving (from an Aztec picture).

latter a girl of ancient Mexico weaving a web of some other description. The one is from a photograph taken from life; the other I have copied from Tylor's "Anthropology" (p. 248); but it appears earlier in the copy of Codex Vaticana in Lord Kingsborough's "Antiquities of Mexico." The way in which the warp is held down and made tense, by a rope or band secured to the lower beam and sat upon by the weaver, is the same in both cases. And it seems that the artist who drew the original rude sketch sought to represent the girl, not as working "the cross-thread of the woof in and out on a stick," but as manipulating the reed-fork with one hand and grasping the heald-rod and shed-rod in the other.

NOTE.—The engravings were prepared while the author was in New Mexico and could not be submitted for his inspection until the paper was ready for the press. Some alterations were made from the original pictures. The following are the most important to be noted: In Plate XXXVIII the batten should appear held horizontally, not obliquely. Fig. 5 is reduced and cannot fairly delineate the gradations in color and regular sharp outlines of the finely-serrated figures. Fig, 53 does not convey the fact that the stripes are of uniform width and all the right-angles accurately made.

SMITHSONIAN INSTITUTION—BUREAU OF ETHNOLOGY.

# PREHISTORIC TEXTILE FABRICS

OF THE

# UNITED STATES,

## DERIVED FROM IMPRESSIONS ON POTTERY.

BY

WILLIAM H. HOLMES.

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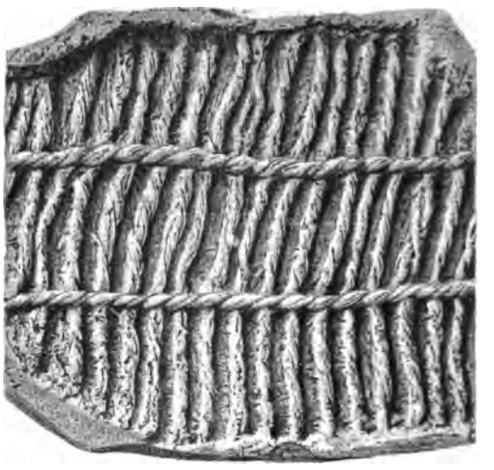
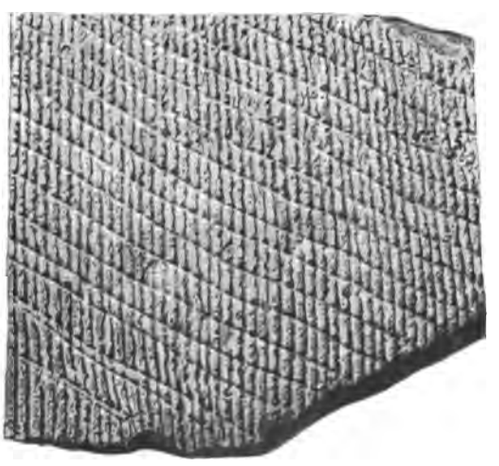
1. POTSHERD

2. CLAY CAST.

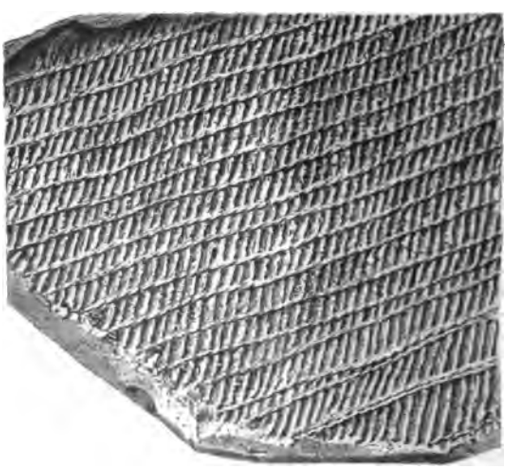
3 POTSHERD



4. CLAY CAST.



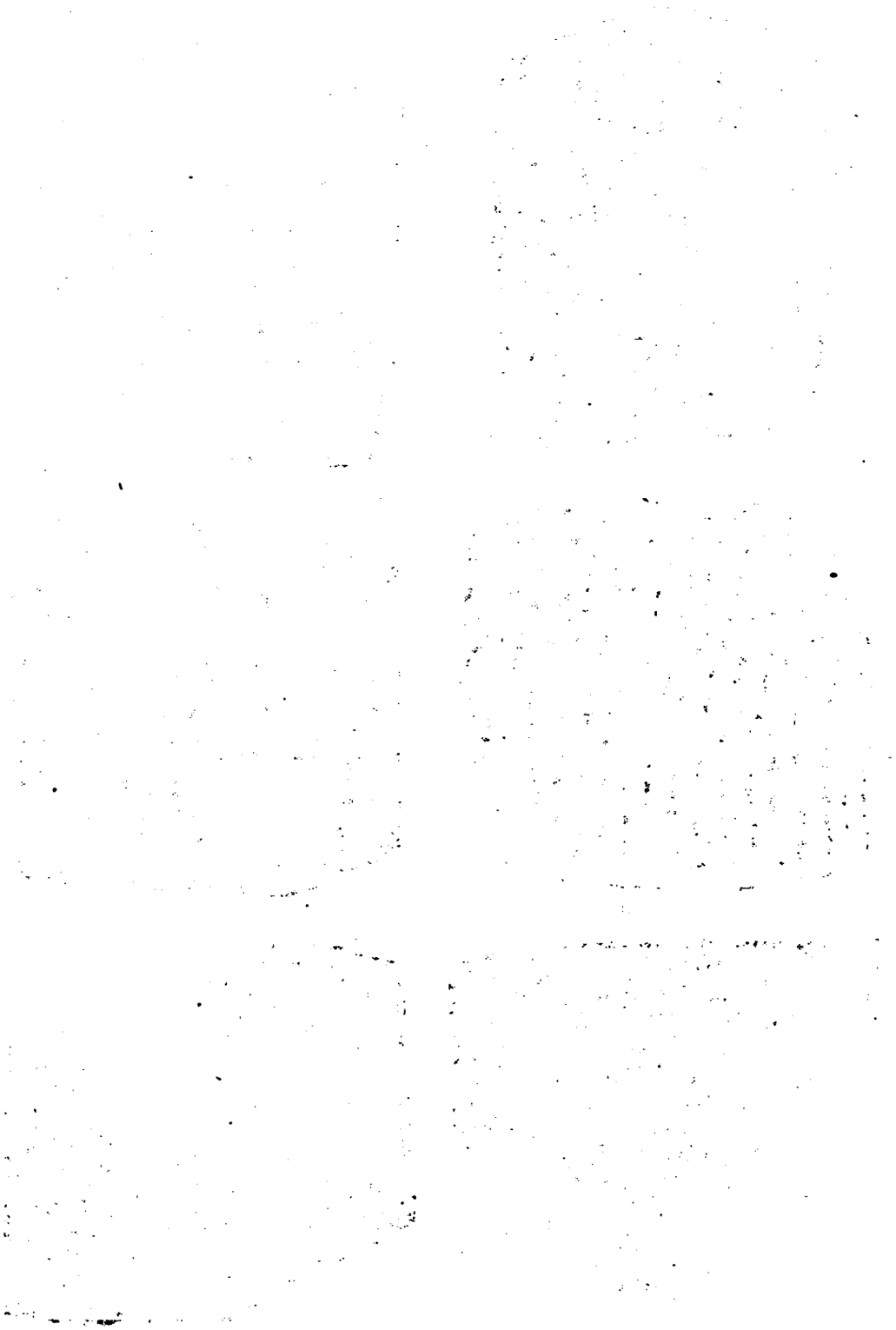
5 POTSHERD



6. CLAY CAST.

A. Hoen & Co. Lithocaustic, Baltimore.

POTTERY WITH IMPRESSIONS OF TEXTILE FABRICS.



# PREHISTORIC TEXTILE FABRICS OF THE UNITED STATES, DERIVED FROM IMPRESSIONS ON POTTERY.

By W. H. Holmes.

## INTRODUCTORY.

It is not my intention in this paper to make an exhaustive study of the art of weaving as practiced by the ancient peoples of this country. To do this would necessitate a very extended study of the materials used and of the methods of preparing them, as well as of the arts of spinning and weaving practiced by primitive peoples generally. This would be a very wide field, and one which I have no need of entering. I may state here, however, that the materials used by savages in weaving their simple fabrics consist generally of the fibre of bark, flax, hemp, nettles, and grasses, which is spun into thread of various sizes; or of splints of wood, twigs, roots, vines, porcupine quills, feathers, and a variety of animal tissues, either plaited or used in an untwisted state. The articles produced are mats, baskets, nets, bags, plain cloths, and entire garments, such as capes, hats, belts, and sandals.

It has been noticed by a few authors that twisted or plaited cords, as well as a considerable variety of woven fabrics, have been used by primitive tribes in the manufacture and ornamentation of pottery. Impressions of these made in the soft clay are frequently preserved on very ancient ware, the original fabrics having long since crumbled to dust. It is to these that I propose calling attention, their restoration having been successfully accomplished in many hundreds of cases by taking impressions in clay from the ancient pottery.

The perfect manner in which the fabric in all its details of plaiting, netting, and weaving can be brought out is a matter of astonishment; the cloth itself could hardly make all the particulars of its construction more manifest.

The examples presented in the accompanying plate will be very instructive, as the fragment of pottery is given on the left, with its rather obscure intaglio impressions, and the clay cast on the right with the cords of the fabric in high relief. The great body of illustrations have been made in pen directly from the clay impressions, and, although

details are more distinctly shown than in the specimens themselves, I believe that nothing is presented that cannot with ease be seen in the originals. Alongside of these restorations I have placed illustrations of fabrics from other primitive sources.

There appears to be a pretty general impression that baskets of the ordinary rigid character have been extensively used by our ancient peoples in the manufacture of pottery to build the vessel in or upon; but my investigations tend to show that such is not the case, and that nets or sacks of pliable materials have been almost exclusively employed. These have been applied to the surface of the vessel, sometimes covering the exterior entirely, and at others only the body or a part of the body. The interior surface is sometimes partially decorated in the same manner.

The nets or other fabrics used have generally been removed before the vessel was burned or even dried. Professor Wyman, in speaking casually of the cord-marked pottery of Tennessee, says:

"It seems incredible that even an Indian would be so prodigal of time and labor as to make the necessary quantity of well-twisted cord or thread, and weave it into shape for the mere purpose of serving as a mold which must be destroyed in making a single copy."

This remark is, however, based upon a false assumption. The fact that the net or fabric has generally been removed while the clay was still soft being susceptible of easy proof. I have observed in many cases that handles and ornaments have been added, and that impressed and incised designs have been made in the soft clay *after* the removal of the woven fabric; besides this there would be no need of the support of a net after the vessel had been fully finished and slightly hardened. Furthermore, I have no doubt that these *textilia* were employed as much for the purpose of enhancing the appearance of the vessel as for supporting it during the process of construction. I have observed, in relation to this point, that in a number of cases, notably the great salt vessels of Saline River, Illinois, the fabric has been applied after the vessel was finished. I arrive at this conclusion from having noticed that the loose threads of the net-like cover sag or festoon toward the rim as if applied to the inverted vessel, Fig. 82. If the net had been used to suspend the vessel while building, the threads would necessarily have hung in the opposite direction.

In support of the idea that ornament was a leading consideration in the employment of these coarse fabrics, we have the well-known fact that simple cord-markings, arranged to form patterns, have been employed by many peoples for embellishment alone. This was a common practice of the ancient inhabitants of Great Britain, as shown by Jewett. The accompanying cut (Fig. 60) is copied from his work.[1]

It is a remarkable fact that very few entire cord-marked vessels have

[1] Jewett, Llewellynn: Grave mounds and their contents, p. 92.

been obtained in this country, although fragments of such are very plentiful.

In Fig. 61 we have an ancient vase from Pennsylvania. It presents a combination of net or basket markings and of separate cord-markings. The regularity of the impressions upon the globular body indicates almost unbroken contact with the interior surface of the woven vessel. The neck and rim have apparently received finishing touches by separately impressing cords or narrow bands of some woven fabric.

Many examples show very irregular markings such as might have been made by rolling the plastic vessel irregularly upon a woven surface, or

FIG. 60.—Ancient British vase with cord ornamentation.

by molding it in an improvised sack made by tying up the margins of a piece of cloth.

It is necessary to distinguish carefully the cord and fabric markings from the stamped designs so common in southern pottery, as well as from the incised designs, some of which imitate fabric markings very closely.

I shall present at once a selection from the numerous examples of the fabrics restored. For convenience of study I have arranged them in six groups, some miscellaneous examples being added in a seventh group. For comparison, a number of illustrations of both ancient and modern textiles are presented.

In regard to methods of manufacture but little need be said. The

appliances used have been extremely simple, the work in a vast majority of cases having been done by hand. It is probable that in many instances a simple frame has been used, the threads of the web or warp being fixed at one end and those of the woof being carried through them by the fingers or by a simple needle or shuttle. A loom with a device for carrying the alternate threads of the warp back and forth may have

FIG. 61.—Ancient fabric marked vessel, Pennsylvania.

been used, but that form of fabric in which the threads are twisted in pairs at each crossing of the woof could only have been made by hand.

The probable methods will be dwelt upon more in detail as the groups are presented. In verifying the various methods of fabrication I have been greatly assisted by Miss Kate C. Osgood, who has successfully reproduced, in cotton cord, all the varieties discovered, all the mechanism necessary being a number of pins set in a drawing board or frame, in the form of three sides of a rectangle, the warp being fixed at one end only and the woof passing back and forth between the lateral rows of pins, as shown in Fig. 74.

## FIRST GROUP.

Fig. 62 illustrates a small fragment of an ordinary coffee sack which I take as a type of the first group. It is a loosely woven fabric of the simplest construction; the two sets of threads being interwoven at right angles to each other, alternate threads of one series passing over and under each of the opposing series as shown in the section, Fig. 63.

It is a remarkable fact that loosely woven examples of this kind of cloth are rarely, if ever, found among the impressions upon clay or in the fabrics themselves where preserved by the salts of copper or by charring. The reason of this probably is that the combination is such that when loosely woven the threads would not remain in place under tension, and the twisted and knotted varieties were consequently preferred.

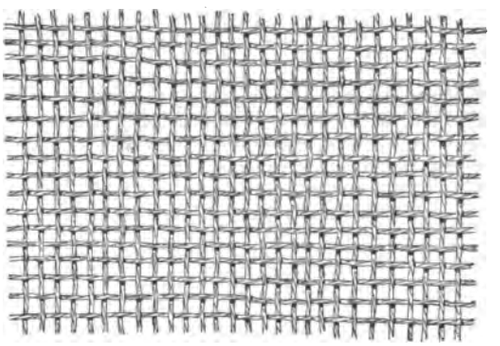


FIG. 62.—Type of Group one—portion of a coffee sack.

FIG. 63.—Section.

It is possible that many of the very irregular impressions observed, in which it is so difficult to trace the combinations of the threads, are of distorted fabrics of this class.

This stuff may be woven by hand in a simple frame, or by any of the primitive forms of the loom.

In most cases, so far as the impressions upon pottery show, when this particular combination is employed, the warp is generally very heavy and the woof comparatively light. This gives a cloth differing greatly from the type in appearance; and when, as is usually the case, the woof threads are beaten down tightly, obscuring those of the web, the resemblance to the type is quite lost.

Examples of this kind of weaving may be obtained from the fictile remains of nearly all the Atlantic States.

The specimen presented in Fig. 64 was obtained from a small fragment of ancient pottery from the State of New York.

It is generally quite difficult to determine which set of threads is the warp and which the woof. In most cases I have preferred to call the

more closely placed threads the woof, as they are readily beaten down by a baton, whereas it would be difficult to manipulate the warp threads if so closely placed. In the specimen illustrated, only the tightly woven threads of the woof appear. The impression is not sufficiently distinct

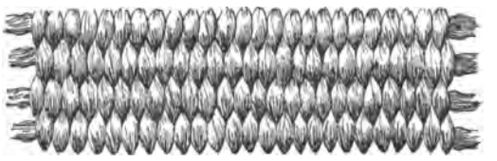


FIG. 64.—Fabric impressed upon ancient pottery, New York.

to show the exact character of the thread, but there are indications that it has been twisted. The regularity and prominence of the ridges indicate a strong, tightly drawn warp.

Fig. 65 represents a form of this type of fabric very common in im-

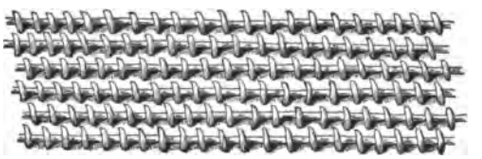


FIG. 65.—From a fragment of ancient pottery, District of Columbia.

pressions upon the pottery of the Middle Atlantic States. This specimen was obtained from a small potsherd picked up near Washington, D. C. The woof or cross-threads are small and uniform in thickness, and pass alternately over and under the somewhat rigid fillets of the web. The apparent rigidity of these fillets may result from the tightening of the series when the fabric was applied to the plastic surface of the vessel.

I present in Fig. 66 the only example of the impression of a woven fab-

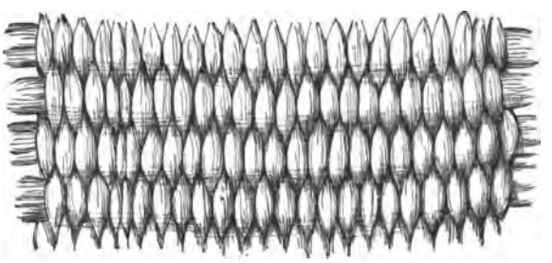


FIG. 66.—From a fragment of ancient Cliff-house pottery.

ric found by the writer in two summers' work among the remains of the ancient Cliff-Dwellers. It was obtained from the banks of the San Juan River, in southeastern Utah. It is probably the imprint of the inte-

rior surface of a more or less rigid basket, such as are to be seen among many of the modern tribes of the Southwest. The character of the

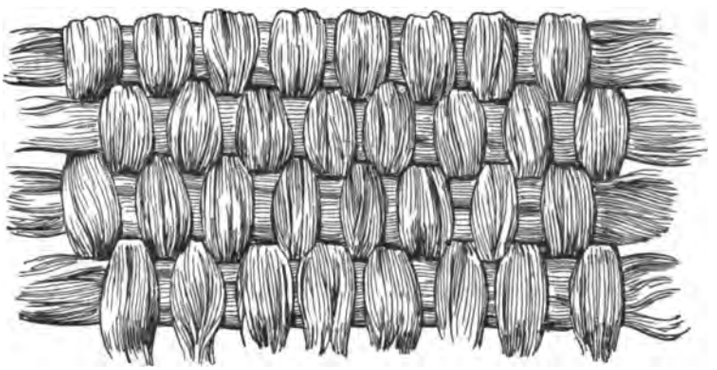


FIG. 67.—Fabric from a cave in Kentucky.

warp cannot be determined, as the woof, which has been of moderately heavy rushes or other untwisted vegetable fillets, entirely hides it.

The caves of Kentucky have furnished specimens of ancient weaving

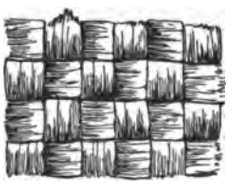


FIG. 68.—Fabric from Swiss Lake-Dwellings.

of much interest. One of these, a small fragment of a mat apparently made from the fiber of bark, or a fibrous rush, is illustrated in Fig. 67.

This simple combination of the web and woof has been employed

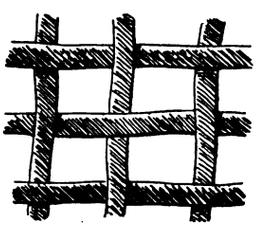


FIG. 69.—Cloth from a mound, Ohio.

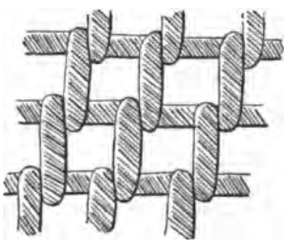


FIG. 70.—Cloth from a mound, Ohio.

FIG. 71.—Section.

by all ancient weavers who have left us examples of their work. The specimen given in Fig. 68 is the work of the ancient Lake-Dwellers

of Switzerland. It is a mat plaited or woven of strips of bast, and was found at Robenhausen, having been preserved in a charred state.[2] Keller gives another example of a similar fabric of much finer texture in Fig. 8, Pl. CXXXVI.

An illustration of this form of fabric is given by Foster,[3] and reproduced in Fig. 69.

In the same place this author presents another form of cloth shown in my Fig. 70. In Fig. 71 we have a section of this fabric. These cloths, with a number of other specimens, were taken from a mound on the west side of the Great Miama River, Butler County, Ohio. The fabric in both samples appears to be composed of some material allied to hemp. As his remarks on these specimens, as well as on the general subject, are quite interesting, I quote them somewhat at length.

"The separation between the fibre and the wood appears to have been as thorough and effectual as at this day by the process of rotting and hackling. The thread, though coarse, is uniform in size, and regularly spun. Two modes of weaving are recognized: In one, by the alternate intersection of the warp and woof, and in the other, the weft is wound once around the warp, a process which could not be accomplished except by hand. In the illustration the interstices have been enlarged to show the method of weaving, but in the original the texture was about the same as that in coarse sail-cloth. In some of the Butler County specimens there is evidently a fringed border."

In regard to the second specimen described, I would remark that it is a very unusual form, no such combination of the parts having come to my notice either in the ancient fabrics themselves or in the impressions on pottery. In a very closely woven cloth it might be possible to employ such a combination, each thread of the web being turned once around each thread of the woof as shown in Fig. 71; but certainly it would work in a very unsatisfactory manner in open fabrics. I would suggest that this example may possibly belong to my second group, which, upon the surface, would have a similar appearance. The combination of this form is shown in the section, Fig. 73.

## SECOND GROUP.

It is not impossible, as previously stated, that open fabrics of the plain type were avoided for the reason that the threads would not remain in place if subjected to tension. A very ingenious method of fixing the threads of open work, without resorting to the device of knotting has been extensively employed in the manufacture of ancient textiles.

[2] Keller: Lake-Dwellers. Fig. 2, Pl. CXXXIV.
[3] Foster: Prehistoric Times.

The simplest form of cloth in which this combination is used is shown in Fig. 72. This example, which was obtained from a small fragment of pottery found in Polk County, Tennessee, may be taken as a type.

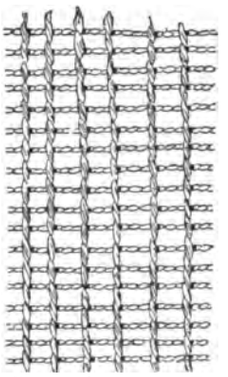


FIG. 72.—From ancient pottery, Tennessee.

FIG. 73.—Section.

Two series of threads are interwoven at right angles, the warp series being arranged in pairs and the woof singly. At each intersection the pairs of warp threads are twisted half around upon themselves, inclosing the woof threads and holding them quite firmly, so that the open mesh is well preserved even when much strained. Fabrics of this character have been employed by the ancient potters of a very extended region, including nearly all the Atlantic States. There are also many varieties of this form of fabric resulting from differences in the size and

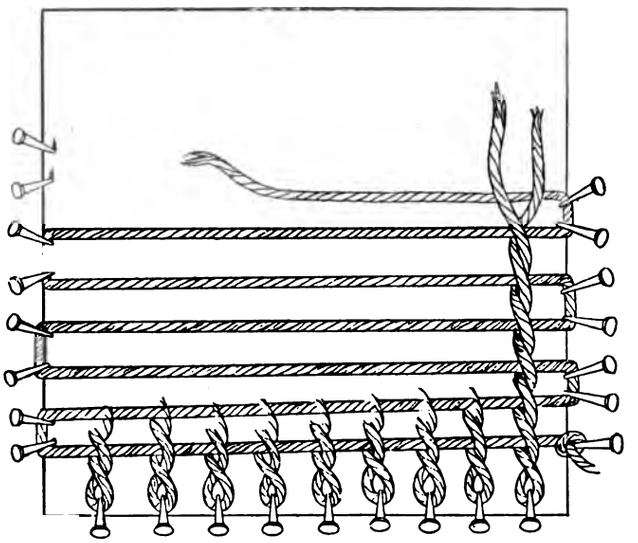


FIG. 74.—Diagram showing the method of weaving Form 2.

spacing of the threads. These differences are well brought out in the series of illustrations that follow.

In regard to the manufacture of this particular fabric, I am unable to arrive at any very definite conclusion. As demonstrated by Miss Osgood, it may be knitted by hand, the threads of the warp being fixed at one end and the woof at both by wrapping about pegs set in a drawing board or frame, as shown in the diagram, Fig. 74.

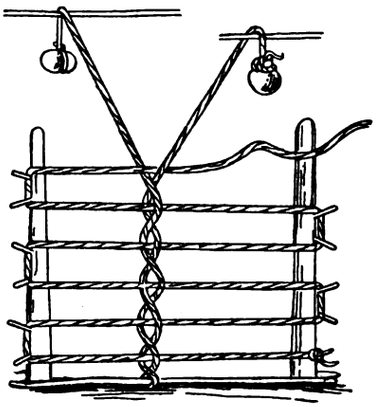


FIG. 75.—Theoretic device for working the twist.

The combination is extremely difficult to produce by mechanical means, and must have been beyond the reach of any primitive loom. I have prepared a diagram, Fig. 75, which shows very clearly the arrangement of threads, and illustrates a possible method of supporting

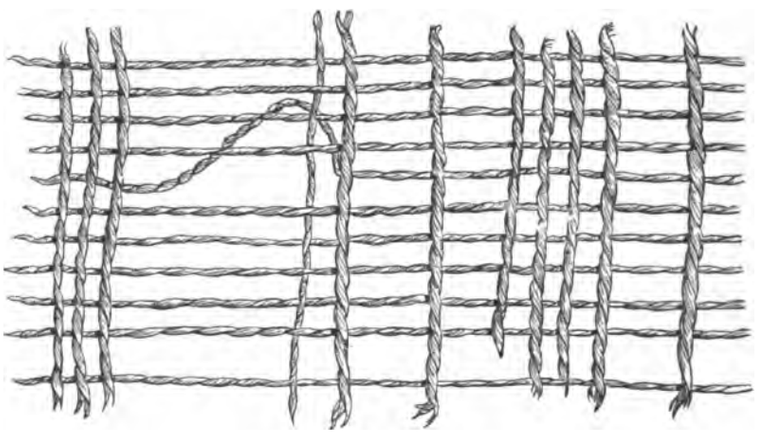


FIG. 76.—From fragment of mound pottery, Tennessee.

the warp while the woof is carried across. As each thread of the woof is laid in place, the threads of the warp can be thrown to the opposite support, a turn or half twist being made at each exchange. The work could be done equally well by beginning at the top and working down-

ward. For the sake of clearness I have drawn but one pair of the warp threads.

Fig. 76 illustrates a characteristic example of this class obtained from a fragment of pottery from the great mound at Sevierville, Tenn.

The impression is quite perfect. The cords are somewhat uneven, and seem to have been only moderately well twisted. They were probably made of some vegetable fiber. It will be observed that the threads of the woof are placed at regular intervals, while those of the web are irregularly placed. It is interesting to notice that in one case the warp has not been doubled, the single thread having, as a consequence, exactly the same relation to the opposing series as corresponding threads

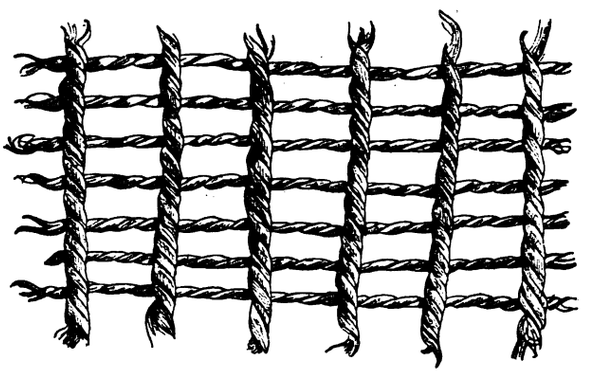


FIG. 77.—From ancient pottery, Georgia.

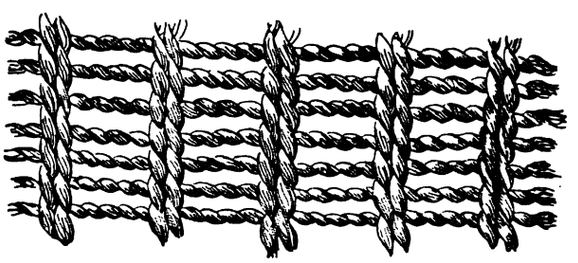


FIG. 78.—From ancient pottery, Tennessee.

in the first form of fabric presented. The impression, of which this is only a part, indicates that the cloth was considerably distorted when applied to the soft clay. The slipping of one of the woof threads is well shown in the upper part of the figure.

The fabric shown in Fig. 77 has been impressed upon an earthen vessel from Macon, Ga. It has been very well and neatly formed, and all the details of fiber, twist, and combination can be made out.

The example given in Fig. 78 differs from the preceding in the spacing and pairing of the warp cords. It was obtained from a fragment of ancient pottery recently collected at Reel Foot Lake, Tennessee.

Fig. 79 represents another interesting specimen from the pottery of the same locality. The border is woven somewhat differently from the body

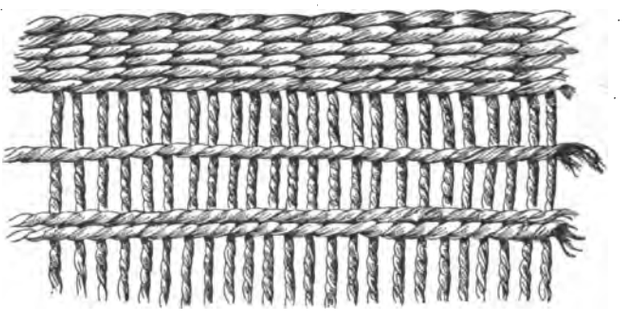


FIG. 79.—From ancient pottery, Tennessee.

of the fabric, two threads of the woof being included in each loop of the warp.

Fig. 80 is from the pottery of the same locality. The threads are much more closely woven than those already given.

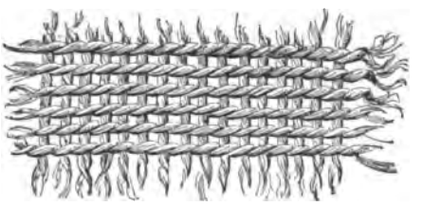


FIG. 80.—From ancient pottery, Tennessee.

The next example, Fig. 81, impressed upon a fragment of clay from Arkansas, has been made of coarse, well-twisted cords. An ornamental border has been produced by looping the cords of the woof, which

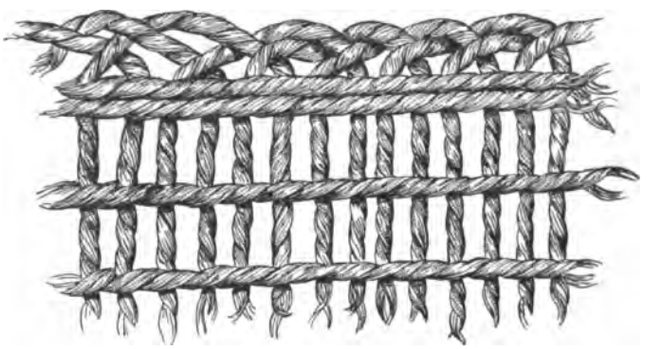


FIG. 81.—From a piece of clay, Arkansas.

seem to have been five in number, each one passing over four others before recrossing the warp.

In no locality are so many fine impressions of textiles upon clay vessels found as in the ancient salt-making districts of the Mississippi Valley. The huge bowl or tub-like vessels used by the primitive salt-makers have very generally been modeled in coarse nets, or otherwise have had many varieties of netting impressed upon them for ornament.

In the accompanying plate (XXXIX) two fine examples of these impressions are given. They are somewhat more clearly defined than the majority of those from which the other illustrations are made.

Fig. 82 illustrates a specimen in which every detail is perfectly preserved. Only a small portion of the original is shown in the cut. The cords are heavy and well twisted, but the spacing is somewhat irregular. I observe one interesting fact in regard to this impression. The fabric has apparently been applied to the inverted vessel, as the loose cords of the woof which run parallel with the rim droop or hang in festoons between the cords of the warp as shown in the illustration, which is here placed, as drawn from the inverted fragment.

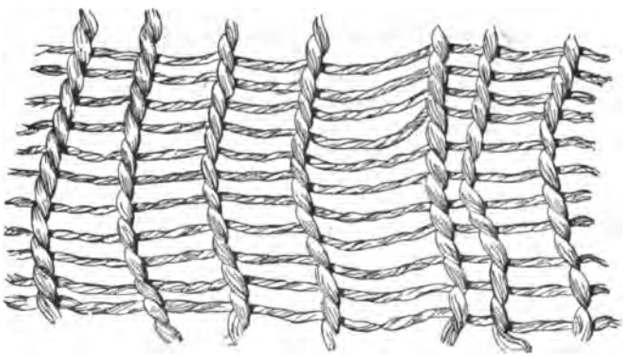


FIG. 82.—From fragment of a large salt vessel, Saline River, Illinois.

The inference to be drawn from this fact is that the fabric was applied to the exterior of the vessel, after it was completed and inverted, for the purpose of enhancing its beauty. When we recollect, however, that these vessels were probably built for service only, with thick walls and rude finish, we are at a loss to see why so much pains should have been taken in their embellishment. It seems highly probable that, generally, the inspiring idea was one of utility, and that the fabric served in some way as a support to the pliable clay, or that the net-work of shallow impressions was supposed to act after the manner of a *dégraissant* to neutralize the tendency to fracture.

Another example from the same locality is shown in Fig. 83. This is similar to that shown in the lower figure of Plate XXXIX. It is very neatly woven of evenly spun and well-twisted thread. The double series is widely spaced as shown in the drawing.

The very interesting specimen illustrated in Fig. 84 was obtained from a small fragment of pottery found in Fort Ripley County, Mis-

souri. The combination of the two series of threads or strands clearly indicates the type of fabric under consideration, the twisted cords of

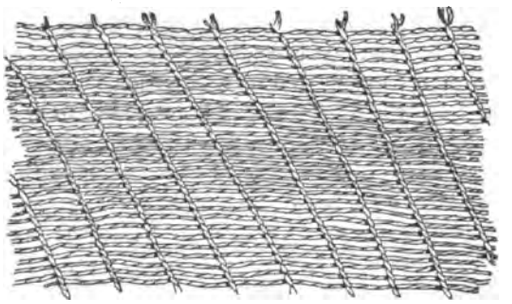


FIG. 83.—From a salt vessel, Saline River, Illinois.

the warp being placed very far apart. The remarkable feature of this example is the character of the woof, which seems to be a broad braid

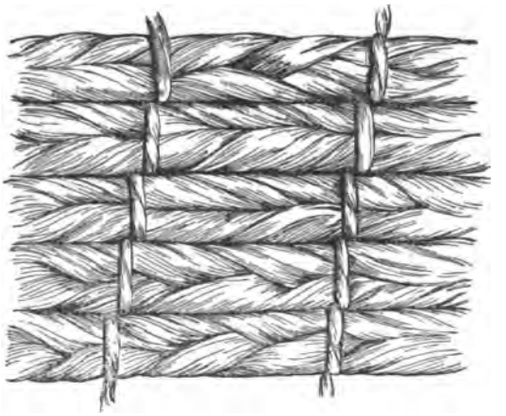


FIG. 84.—From ancient pottery, Missouri.

formed by plaiting three strands of untwisted fiber, probably bast. All the details are shown in the most satisfactory manner in the clay cast.

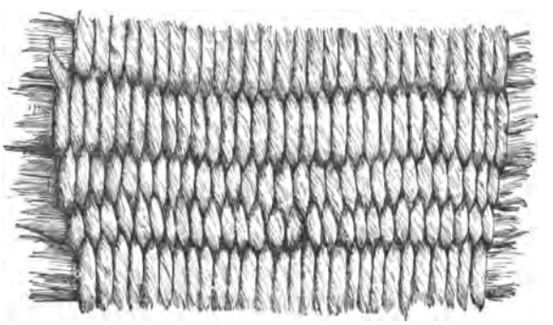


FIG. 85.—From ancient pottery, Tennessee.

The open character of the web in this specimen assists very much in explaining the structure of tightly-woven examples such as that shown in Fig. 85, in which the cross cords are so closely placed that the broad bands of the opposing series are completely hidden.

I have made the drawing to show fillets of fiber appearing at the ends. These do not appear in the impression. It is highly probable, however, that these fillets are plaited bands, as in the preceding example. They are wide and flat, giving somewhat the effect of basket-work of splints or of rushes. This specimen was obtained in Carter County, Tennessee.

We have a few pieces of this variety of fabric which have been

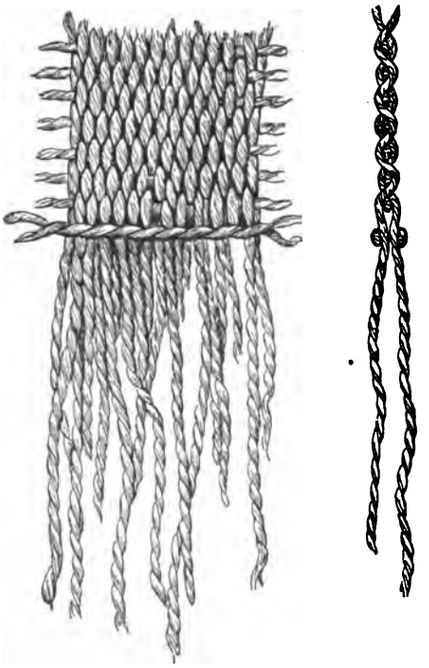


FIG. 86.—Fabric from a copper celt, Iowa.

preserved by contact with the salts of copper. Professor Farquharson describes an example from a mound on the banks of the Mississippi River, near the city of Davenport. It had been wrapped about a copper implement resembling a celt, and was at the time of its recovery in a very perfect state of preservation. In describing this cloth Mr. Farquharson says that "the warp is composed of four cords, that is, of *two double and twisted* cords, and the woof of *one* such doubled and twisted cord which passes between the two parts of the warp; the latter being twisted at each change, allowing the cords to be brought close together so as to cover the woof almost entirely." His illustration

is somewhat erroneous, the artist not having had quite a clear understanding of the combination of threads. This cloth has a general resemblance to ordinary coffee-sacking. In Fig. 86 I give an illustration of this fabric derived from the opposite side of the celt.

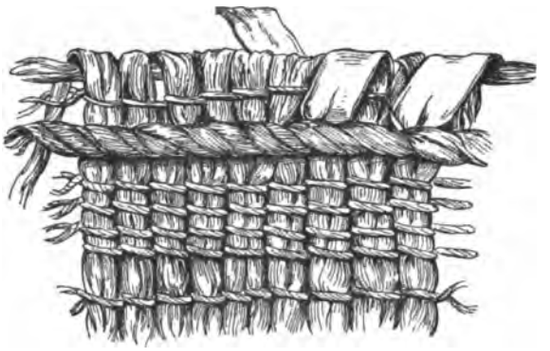
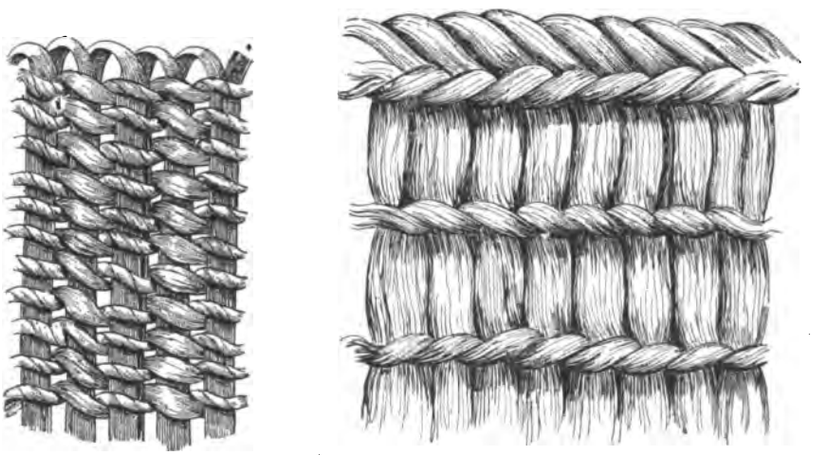


FIG. 87.—Modern work, Vancouver's Island.

Although I am not quite positive, it is my opinion, after having examined the specimen carefully, that the body of the cloth belongs to my first group and that the border only is of the second group. My section and drawing give a clear idea of the construction of this fabric. A finely-



FIGS. 88 and 89.—Fabrics from the Lake Dwellings, Switzerland.

preserved bit of cloth belonging to the group under consideration was recently found fixed to the surface of a copper image from one of the Etowah mounds in Georgia.

This form of weaving is very common among the productions of the modern tribes of Western America. A very good example is shown in Fig. 87, which represents the border of a cape like garment made by the

Clyoquot Indians, of Vancouver's Island. It is woven, apparently, of the fiber of bark, both web and woof showing considerable diversity in the size of the cords. The border has been strengthened by sewing in a broad, thin fillet of rawhide.

The beautiful mats of the northwest coast peoples, from California to Ounalaska, are often woven in this manner, the materials being bast, grass, or rushes.

The Lake Dwellers of Switzerland seem to have made a great many varieties of cloth of this type. I have reproduced four examples from the great work of Dr. Keller. Fig. 88 is copied from his Fig. 1, Plate CXXXV. It exhibits some variations from the type, double strips of

FIG. 90.—Fabric from the Lake Dwellings, Switzerland.

bast being bound by a woof consisting of alternate strips of bast and cords. It is from Robenhausen.

In Figs. 89 and 90 we have typical examples from the same locality. The woof series seems to consist of untwisted strands of bast or flax.

## THIRD GROUP.

A third form of fabric is distinguished from the last by marked peculiarities in the combinations of the threads. The threads of the warp are arranged in pairs as in the last form described, but are twisted in such a way as to inclose two of the opposing series instead of one, each succeeding pair of warp threads taking up alternate pairs of the woof threads, as shown in the section, Fig. 91. This is a very interesting variety, and apparently one that would possess coherence and elasticity of a very high order.

In Fig. 92 a simple scheme of plaiting or weaving this material is suggested. It will be seen to differ from the last chiefly in the way in which the woof is taken up by the warp.

The ancient pottery of the Mississippi Valley furnishes many examples of this fabric. It is made of twisted cords and threads of sizes similar

to those of the other work described, varying from the weight of ordinary spool cotton to that of heavy twine. The mesh is generally quite open.

FIG. 91.—Section.

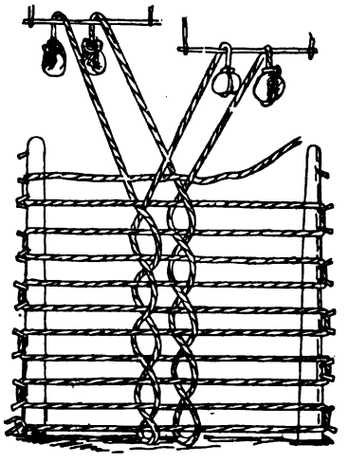


FIG. 92.—Theoretical device for weaving third group.

In Fig. 93 we have a very well preserved example from Reelfoot Lake, Tennessee. It was obtained from a large fragment of coarse pottery. Other pieces are nearly twice as coarse, while some are much finer.

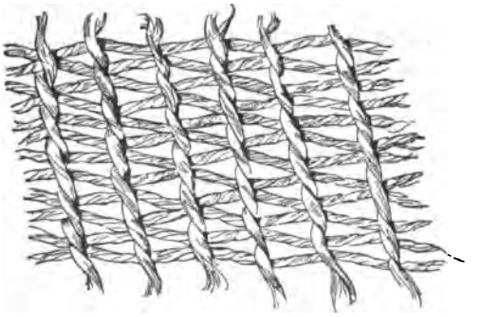


FIG. 93.—From the ancient pottery of Tennessee.

Figs. 94 and 95 are finer specimens from the same locality.

We have also good examples from Saline River, Illinois. They are obtained from fragments of the gigantic salt vessels so plentiful in that locality.

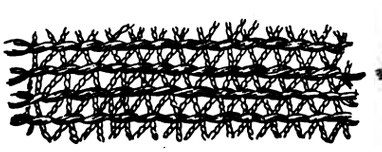


FIG. 94.

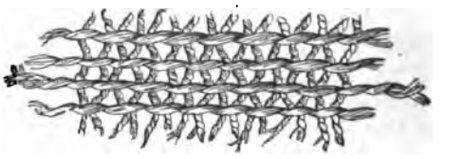


FIG. 95.

From the ancient pottery of Tennessee.

The upper figure of Plate XXXIX illustrates one of these specimens. Other examples have been obtained from Roane County, Tennessee.

A piece of charred cloth from a mound in Butler County, Ohio, has been woven in this manner. Foster has described examples of the two preceding forms from the same locality. The material used is a vegetable fiber obtained from the bark of trees or from some fibrous weed. This specimen is now in the National Museum.

An interesting variety of this form is given in Fig. 96. It is from a

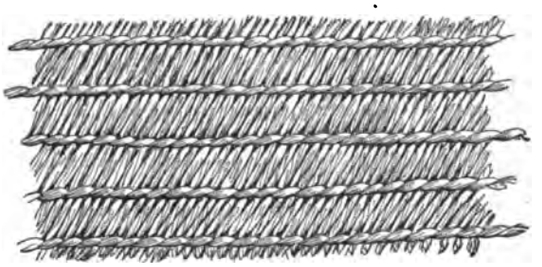


FIG. 96.—From ancient pottery, Tennessee.

small piece of pottery exhumed from a mound on Fain's Island, Jefferson County, Tennessee. The threads of the woof are quite close together, those of the web far apart.

A very fine example of this variety of fabric was obtained by Dr. Yarrow from an ancient cemetery near Dos Pueblos, Cal. It is illustrated in Fig. 2, Plate XIV, vol. VII, of Surveys West of the 100th Meridian.[4] In describing it, Professor Putnam says that the fiber is probably obtained from a species of *yucca*. He says that "the woof is made of two strands crossing the warp in such a manner that the strands alternate in passing over and under it, and at the same time inclosing two alternate strands of the latter, making a letter X figure of the warp, united at the center of the X by the double strands of the woof." It should be noticed that

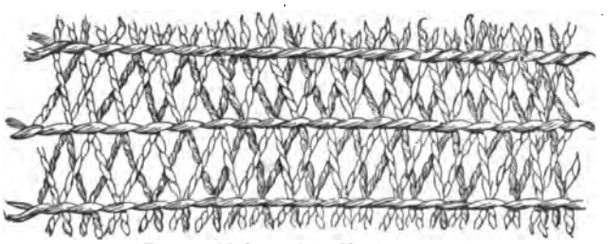


FIG. 97.—Modern fabric, Northwest coast.

the series of cords called the woof by Professor Putnam are designated as warp in my own descriptions. The illustration shows a fabric identical with that given in the upper figure of Plate XXXIX, and the description quoted describes perfectly the type of fabric under consideration.

[4] Putnam, F. W., in Vol. VII of Surveys West of the 100th Meridian, page 244.

This method of weaving is still practiced by some of the western tribes, as may be seen by a visit to the national collection.

A somewhat complicated arrangement of the threads may be seen in the fabric shown in Fig. 97. It is clearly only a variation of the combination just described. The manner in which the threads pass over, under, and across each other can be more easily understood by reference to the figure than by any description. It comes from one of the Northwest coast tribes.

## FOURTH GROUP.

A fourth form of fabric, illustrated in Fig. 98, is of very rare occurrence on our fictile remains.

It is a very neatly woven diagonal from the ancient pottery of Polk

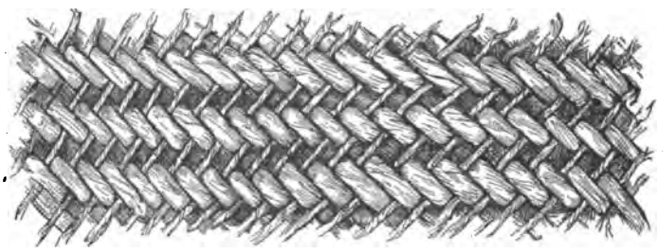


FIG. 98.—Diagonal fabric, ancient pottery of Tennessee.

County, Tennessee. Two series of cords have been interwoven at right angles to each other, but so arranged as to produce a diagonal pattern.

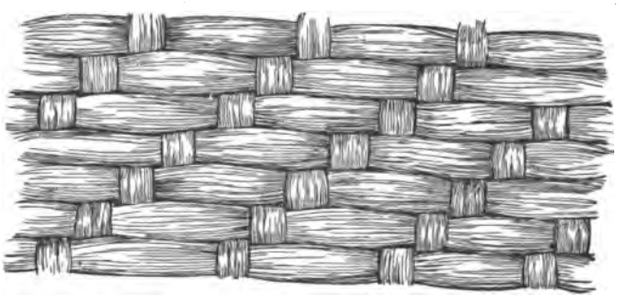


FIG. 99.—From the ancient pottery of Alabama.

One series of the cords is fine and well twisted, the other coarser and very slightly twisted.

The remarkable sample of matting shown in Fig. 99 is from a small piece of pottery from Alabama. It has been worked in the diagonal

style, but is somewhat different from the last example. It has probably been made of rushes or heavy blades of grass.

The texture shown in Fig. 100 is from a rather indistinct impression upon a small fragment of pottery from Iowa. One series of the strands

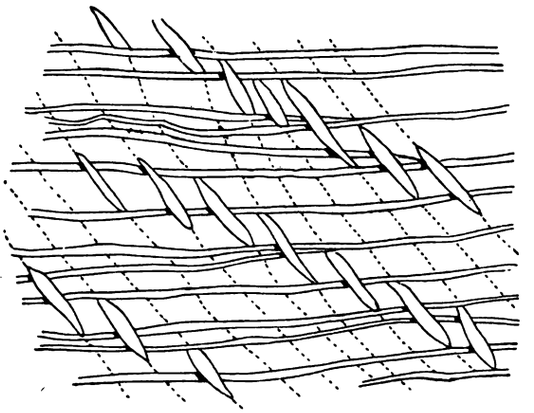


FIG. 100.—From ancient pottery, Iowa.

seems to have been quite rigid, while the other has been pliable, and appear in the impression only where they have crossed the rigid series. The dotted lines indicate their probable course on the under side of the cross threads.

This form of fabric is very common in modern work.

## FIFTH GROUP.

In Fig. 101 I present a variety of ancient fabric which has not to my knowledge been found upon ceramic products. This specimen shows

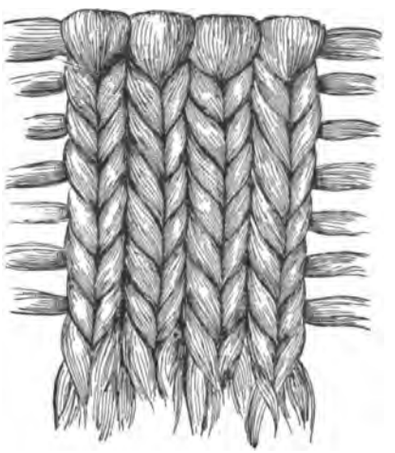


FIG. 101.—Plaiting of a sandal, Kentucky cave.

the method of plaiting sandals practiced by the ancient inhabitants of Kentucky. Numbers of these very interesting relics have been obtained from the great caves of that State. They are beautifully woven, and well shaped to the foot.

The fiber has the appearance of bast and is plaited in untwisted strands, after the manner shown in the illustration. Professor Putman describes a number of cast-off sandals from Salt Cave, Kentucky, as "neatly made of finely braided and twisted leaves of rushes."[5]

Fig. 102 illustrates a somewhat similar method of plaiting practiced by the Lake Dwellers of Switzerland, from one of Keller's figures.[6]

FIG. 102.—Braiding done by the Lake-Dwellers.

## SIXTH GROUP.

The art of making nets of spun and twisted cords seems to have been practiced by many of the ancient peoples of America. Beautiful examples have been found in the *huacas* of the Incas and in the tombs of the Aztecs. They were used by the prehistoric tribes of California and the ancient inhabitants of Alaska. Nets were in use by the Indians of Florida and Virginia at the time of the discovery, and the ancient pottery of the Atlantic States has preserved impressions of a number of varieties. It is possible that some of these impressions may be from European nets, but we have plentiful historical proof that nets of hemp were in use by the natives, and as all of this pottery is very old it is probable that the impressions upon the fragments are from nets of native manufacture.

Wyman states that nets or net impressions have not been found among the antiquities of Tennessee. I have found, however, that the pottery of Carolina, Virginia, and Maryland furnish examples of net-

[5] Putnam, F. W. Eighth Annual Report of the Peabody Museum, p. 49.
[6] Keller, Dr. F. Lake Dwellers. Fig. 3; Pl. CXXXVI.

ting in great numbers. In many cases the meshes have been distorted by stretching and overlapping so that the fabric cannot be examined in detail; in other cases the impressions have been so deep that casts cannot be taken, and in a majority of cases the fragments are so decayed that no details of the cords and their combinations can be made out.

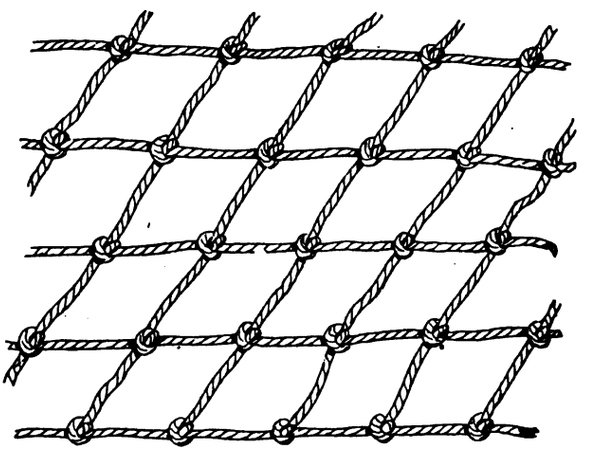


FIG. 103.—From ancient pottery, District of Columbia.

In Fig. 103 we have a thoroughly satisfactory restoration from a small fragment of pottery picked up in the District of Columbia. It is shown a little larger than natural size in the drawing. The impression is so perfect that the twist of the cord and the form of the knot may be seen with ease. Most of the examples from this locality are of much finer cord and have a less open mesh than the specimen illustrated. It is a

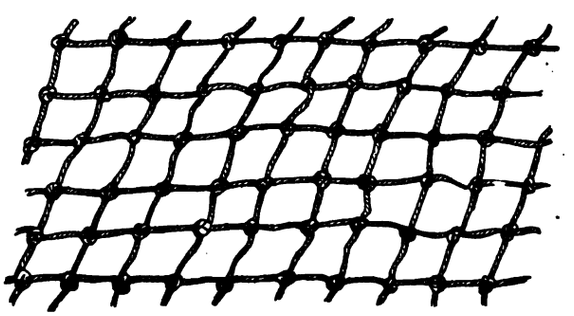


FIG. 104.—Net from the pottery of North Carolina.

noteworthy fact that in one of these specimens an incised pattern has been added to the surface of the soft clay after the removal of the net.

Recent collections from the mounds of Western North Carolina have brought to light many examples of net-marked pottery. Generally the impressions are quite obscure, but enough can be seen in the cast to

show clearly the character of the fabric. The restoration given in Fig. 104 represents an average mesh, others being finer and others coarser. Another specimen from the same collection is shown in Fig. 105. The impression is not very distinct, but there is an apparent doubling of the cords, indicating a very unusual combination. It is

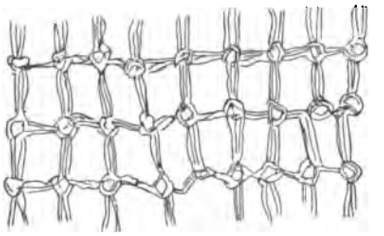


FIG. 105.—Net from the pottery of North Carolina.

possible that this may have come from the imperfect imprinting, but I can detect no indications of a shifting of the net upon the soft clay.

Many interesting examples could be given, both from the ancient and modern work of the inhabitants of the Pacific coast, but for the present I shall content myself by presenting a single example from the Lake Dwellings of Switzerland (Fig. 106):

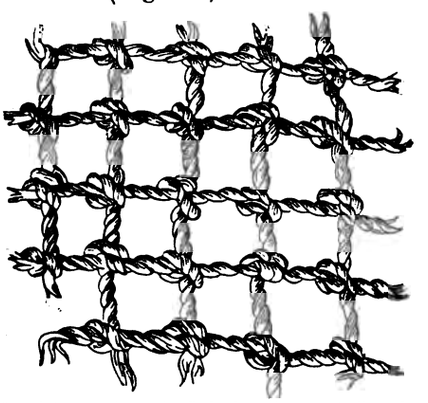


FIG. 106.—Net from the Swiss Lake Dwellings. Keller, plate, CXXX.

## MISCELLANEOUS FORMS.

The forms of fabrics used by the ancient tribes of the Middle and Northern Atlantic States in the manufacture and ornamentation of their pottery have differed materially from those used in the South and West. As a rule the fragments are smaller and the impressions less perfectly preserved. The fabrics have been more complicated and less carefully applied to the vessel. In many cases the impressions seem to have been made from disconnected bands, belts, or strips of cloth. Single cords,

or cords arranged in groups by rolling on sticks, or by other contrivances, have been extensively employed. Baskets have doubtless been used, some of which have been woven, but others have apparently been of bark or skin, with stitched designs of thread or quills. Some of the impressions suggest the use of woven vessels or fabrics filled up with clay or resin, so that the prominences only are imprinted, or otherwise cloths may have been used in which raised figures were worked.

Fig. 107 is obtained from a fragment of pottery from New Jersey. The impressions are extremely puzzling, but are such as I imagine might be

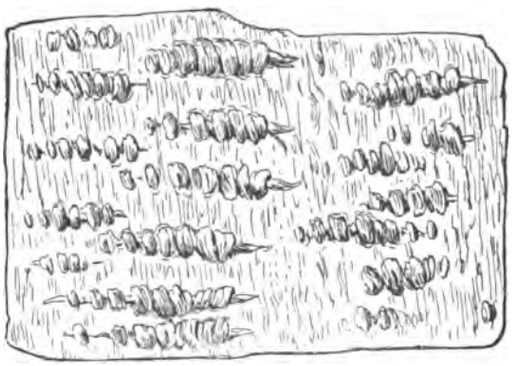


FIG. 107.—From the ancient pottery of New Jersey.

made by the use of a basket, the meshes of which had been filled up with clay or resin so that only the more prominent ridges or series of thongs remain uncovered to give impressions upon the clay. But the threads or thongs indicate a pliable net rather than a basket, and the appearance of the horizontal threads at the ends of the series of raised stitches suggests that possibly the material may have been bark or smooth cloth with a heavy pattern stitched into it.

Very similar to the above is the example given in Fig. 108, also derived from the pottery of New Jersey.

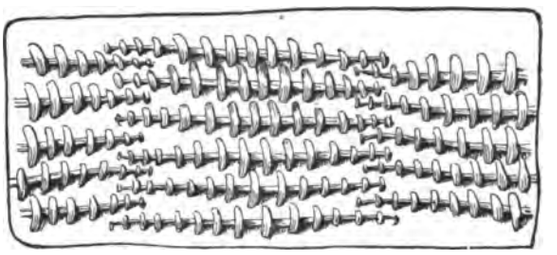


FIG. 108.—From the ancient pottery of New Jersey.

Fig. 109 illustrates an impression upon another fragment from the same state. This impression may have been made by a piece of birch bark or fine fabric with a pattern sewed into it with cords or quills.

Fig. 110 illustrates an impression upon a large, well-made vase, with scalloped rim, from Easton, Pa. The character of the fabric is difficult to make out, the impression suggesting bead-work. That it is from a fabric, however, is evident from the fact that there is system and uni-

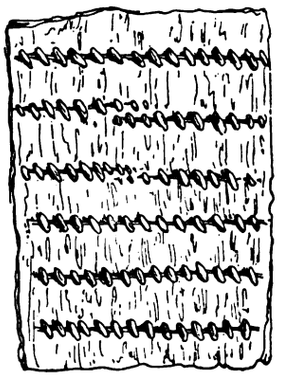


FIG. 109.—From the ancient pottery of New Jersey.

formity in the arrangement of markings, the indentations alternating as in the impressions of fabrics of the simplest type. Yet there is an appearance of patchwork in the impression that suggests separate applications of the material.

In Figs. 111 and 112 we have what appear to be impressions of bands

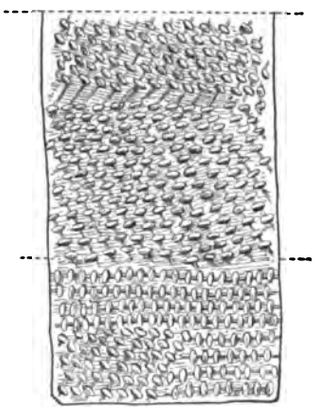


FIG. 110.—From the ancient pottery of Pennsylvania.

or belts. The first shown consists of six parallel cords, coarse and well twisted, with a border of short cord indentations placed at regular intervals. This is a very usual form in all parts of the country, from the Mandan towns of the Missouri to Florida. It is possible that the cords may in this case have been separately impressed, but the example given

in Fig. 112 is undoubtedly from a woven band or belt, the middle portion of which seems to have been a closely-woven cloth, with a sort of pattern produced by series of raised or knotted threads. The borders con-

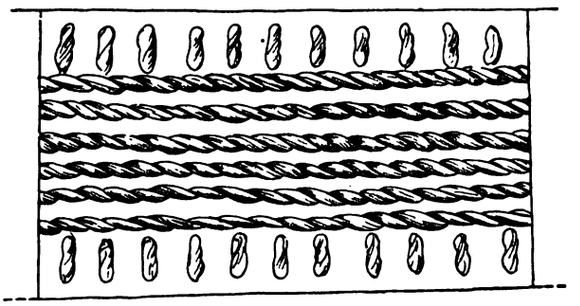


FIG. 111.—From the ancient pottery of Ohio.

sist of single longitudinal cord impressions with an edging of short cord indentations placed at right angles to the belt.

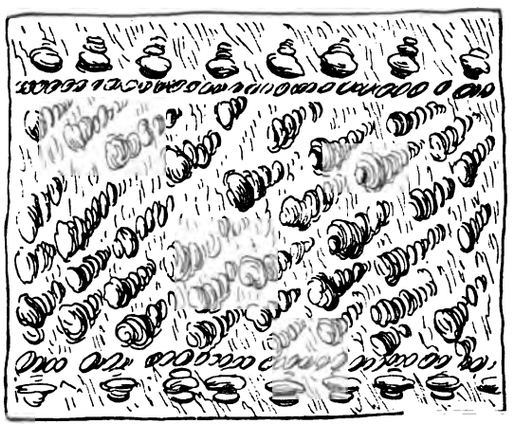


FIG. 112.—From the ancient pottery of New Jersey.

Similar to the last is the very effective decorative design impressed upon a large fragment of pottery from Alabama, shown in Fig. 113. The

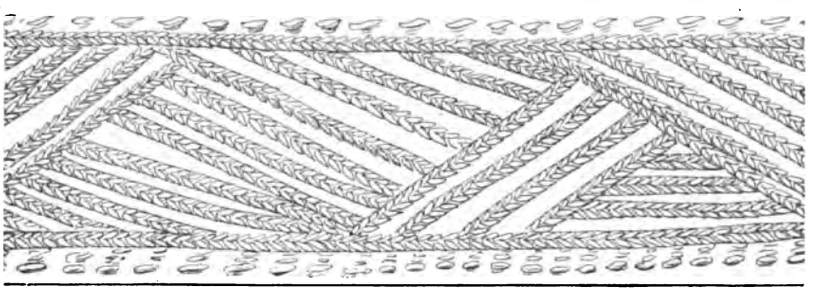


FIG. 113.—From the ancient pottery of Alabama.

peculiarity of this example is the use of plaited instead of twisted cords. The work is neatly done and very effective. It seems to me almost certain that single cords have been used. They have been so imprinted as to form a zone, filled with groups of lines placed at various angles. An ornamental border of short lines has been added, as in the examples previously given.

Two other examples of cord ornamentation, which may be duplicated from the pottery of almost any of the Atlantic States, are presented in Figs. 114 and 115, the first from a fragment of pottery from Charles County, Maryland, and the other from the pottery of Alabama.

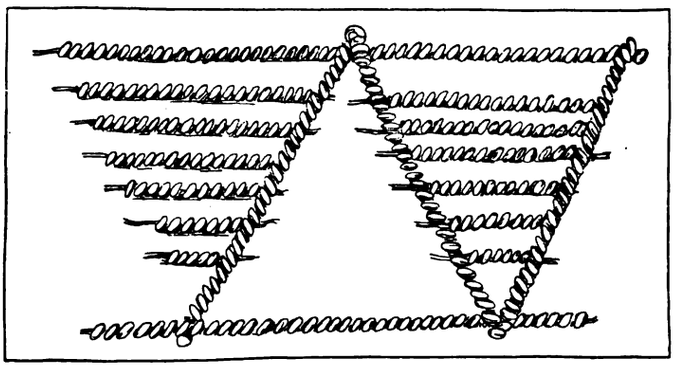


FIG. 114.—Cord-markings from ancient pottery of Maryland.

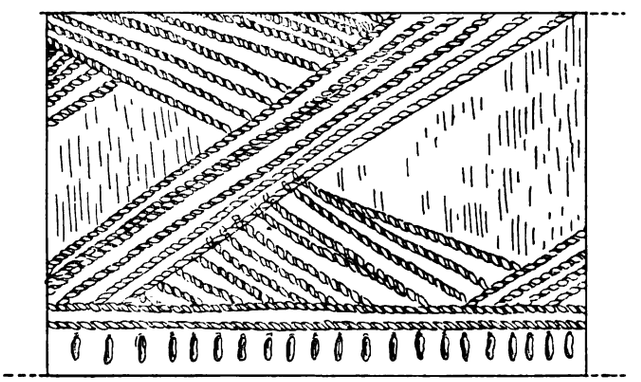


FIG. 115.—Cord-markings from the ancient pottery of Alabama.

It will readily be seen that it is extremely difficult to draw a line between an ornamentation produced by the use of single or grouped cords and that made by the use of fabrics.

It is not less difficult to say just how much of this use of cords and fabrics is to be attributed to manufacture simply and how much to ornament.

Although the restorations here presented certainly throw considerable light upon the textile fabrics of the ancient inhabitants of the At-

lantic States, it cannot be affirmed that anything like a complete idea of their fabrics has been gained. Impressions upon pottery represent a class of work utilized in the fictile arts. We cannot say what other fabrics were produced and used for other purposes.

However this may be, attention should be called to the fact that the work described, though varied and ingenious, exhibits no characters in execution or design not wholly consonant with the art of a stone-age people. There is nothing superior to or specifically different from the work of our modern Indians.

The origin of the use of fabrics and of separate cords in the ornamentation of pottery is very obscure. Baskets and nets were doubtless in use by many tribes throughout their pottery making period. The shaping of earthen vessels in or upon baskets either of plain bark or of woven splints or of fiber must frequently have occurred. The peculiar impressions left upon the clay probably came in time to be regarded as ornamental, and were applied for purposes of embellishment alone. Decorative art has thus been enriched by many elements of beauty. These now survive in incised, stamped, and painted designs. The forms as well as the ornamentation of clay vessels very naturally preserve traces of the former intimacy of the two arts.

Since the stereotyping of these pages I have come upon a short paper by George E. Sellers (Popular Science Monthly, Vol. XI, p. 573), in which is given what I believe to be a correct view of the use of nets in the manufacture of the large salt vessels referred to on pages 398 and 409. The use of interior conical moulds of indurated clay makes clear the reasons for the reversed festooning of the cords to which I called attention.

SMITHSONIAN INSTITUTION—BUREAU OF ETHNOLOGY.

# ILLUSTRATED CATALOGUE

OF A

# PORTION OF THE COLLECTIONS MADE BY THE BUREAU OF ETHNOLOGY

DURING THE

# FIELD SEASON OF 1881.

WILLIAM H. HOLMES.

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# ILLUSTRATED CATALOGUE OF A PORTION OF THE ETHNOLOGIC AND ARCHÆOLOGIC COLLECTIONS MADE BY THE BUREAU OF ETHNOLOGY DURING THE YEAR 1881.

By William H. Holmes.

## COLLECTION MADE BY EDWARD PALMER, IN NORTH CAROLINA, TENNESSEE, AND ARKANSAS.

### INTRODUCTORY.

Mr. Palmer began his explorations early in July, 1881, and continued with marked success until the end of the year.

He first paid a visit to the Cherokee Indians of North Carolina, and collected a large number of articles manufactured or used by this people, besides a number of antiquities from the same region.

From Carolina he crossed into Tennessee, and began work by opening a number of mounds in Cocke County. In September he opened a very important mound, which I have named the McMahan Mound. It is located in the vicinity of Sevierville, Sevier County. Afterwards mounds were opened on Fain's Island, at Dandridge, and at Kingston.

In September he crossed into Arkansas and made extensive explorations at Osceola, Pecan Point, Arkansas Post, and Indian Bay.

It has devolved upon the writer to examine and catalogue this fine collection.

In preparing the catalogue the plan of arrangement already adopted by the Bureau has been carried out; that is, a primary classification by locality and a secondary by material.

The descriptions of specimens are taken from the card catalogue prepared by the writer on first opening the collection, and will be given in full, excepting in cases where detailed descriptions have been furnished in separate papers, either in this or the preceding Annual Report. Cuts have been made of a number of the more interesting specimens. The localities are named in the order of their exploration.

## COLLECTIONS FROM JACKSON COUNTY, NORTH CAROLINA.

### OBTAINED CHIEFLY FROM THE CHEROKEE INDIANS.

#### ARTICLES OF STONE.

62953. A small disk of dark-gray slate, 1¼ inches in diameter and 1½ inches in thickness. The form is symmetrical and the surface well polished. The sides are convex, slightly so near the center and abruptly so near the circumference. The rim or peripheral surface is squared by grinding, the circular form being accurately preserved. This specimen was obtained from an aged Cherokee, who stated that it had formerly been used by his people in playing some sort of game. It seems not improbable that this stone has been used for polishing pottery.

62952. A small subglobular pebble used as a polishing stone for pottery.

62954. A polishing stone similar to the above. This implement was seen in use by the collector.

62947. A hemispherical stone, probably used as a nut-cracker.

62944. A stone implement somewhat resembling a thick, round-pointed pick, 4½ inches in length and 1 inch in diameter. It is perforated exactly as an iron pick would be for the insertion of a handle. The perforation has been produced by boring from opposite sides; at the surface it is five-eighths of an inch in diameter, and midway about three-eighths. The material seems to be an indurated clay or soft slate.

The collector suggests that this specimen was probably used for smoothing bow-strings or straightening arrow-shafts.

62949. Eight arrow points of gray and blackish chalcedony.

62950. Pipe of gray, indurated steatite, of modern Cherokee manufacture.

62951. Pipe of dark greenstone, highly polished. It is well modeled, but of a recent type.

62888. Grooved ax of compact greenish sandstone; found near Bakersville, N. C.

#### ARTICLES OF CLAY.

Obtained from the Southern Band of Cherokees, Jackson County, North Carolina.

The manufacture of pottery, once so universally practiced by the Atlantic coast Indians, is still kept up by this tribe, rather, however, for

the purpose of trade than for use in their domestic arts. The vessels are, to a great extent, modeled after the ware of the whites, but the methods of manufacture seem to be almost wholly aboriginal.

63070. A handled mug or cup of brownish ware. The form is not aboriginal. It is composed of clay, tempered, apparently, with pulverized shell. The surface has a slight polish produced by a polishing implement. The height is 4½ inches and the width nearly the same.

63068. Large flat-bottomed bowl, 6 inches in height, 11 inches in diamter at the top, and 8 at the base. Although made without a wheel, this vessel is quite symmetrical. The thickness is from one-fourth to one-half of an inch. The material has been a dark clay paste with tempering of powdered mica.

63066. A three-legged pot, with spherical body, resembling very closely in appearance the common iron cooking pot of the whites. The rim is 6 inches in diameter, and 1 inch high. The body is 9 inches in diameter. Two handles are attached to the upper part of the body. The form is symmetrical and the surface highly polished. The polishing stone has been used with so much skill that the effect of a glaze is well produced. The materials used were clay and pulverized mica. The color is dark brown.

63067. A strong, rudely made vessel shaped like a half cask. The walls are about one-half an inch in thickness. The surface is rough, the polishing stone having been very carelessly applied.

63068. A flat-bottomed bowl symmetrical in shape but rudely finished.

### VEGETAL SUBSTANCES.

63063. Basket sieve said to be used to separate the finer from the coarser particles of pounded corn. The coarse meal thus obtained is boiled and allowed to ferment. This is used as food and is called *connauchana*. The sieve is made of split cane carefully smoothed; some of the strips are dyed red and others brown. A simple ornamental design is worked in these colors. The opening is square, with rounded corners, the sides measuring 14 inches. The depth is 5 inches. The bottom is flat and loosely woven.

63072. A bottle-shaped basket, with constricted neck and rectangular body, used by the Cherokees for carrying fish. Height, 11 inches; width of mouth, 4 inches; diameter of body, 6 inches. It is made of strips of white oak or hickory, one-fourth of an inch in thickness.

63073. Basket made of strips of white oak intended for the storage of seeds and for other household uses. The rim is about 5 inches in diameter; the body is 8 inches in diameter, the base being rectangular and flat.

63074. Basket, made of cane, used for storing seed.

63076. Two baskets, made of cane, probably used for household purposes. They are neatly ornamented with simple designs, produced by the use of colored strips. The rims are oval in shape, and the bases rectangular. The larger will hold about half a bushel, the smaller about a gallon.

63077. Small basket with a handle, made of splints of white oak. Yellow strips of hickory bark are used to ornament the rim. Other colors are obtained by using bark of different trees, maple, walnut, etc.

63078. Small cup or dish carved from laurel or cucumber wood. It is very neatly made. The depth is about 1 inch; the width 5 inches.

63064. Large spoon, carved from laurel or cucumber wood, used by the Cherokees in handling the *connawhana*, or fermented meal. The carving is neatly done. The heart-shaped bowl is 6 inches in length, 4 in width, and about 2 in depth. The handle is 12 inches long, and is embellished at the end by a knob and ring. The knob is carved to represent a turtle's or snake's head.

63065. A smaller spoon similar in shape to the above.

63087. A large, five-pronged fork carved from the wood of the *Magnolia glauca* (?). It resembles the iron forks of the whites.

63088. A small, three-pronged fork of the same pattern and material as the above.

63080. A wooden comb made in imitation of the shell combs used by white ladies for supporting and ornamenting the back hair. The carving is said to have been done with a knife. Considerable skill is shown in the ornamental design at the top. The wood is maple or beech.

63089. A walnut paddle or club, used to beat clothes in washing.

63059. Bow of locust wood, 5 feet long, one-half an inch thick, and 1½ inches wide in the middle, tapering at the ends to 1 inch. The back of the bow is undressed, the bark simply having been removed. The string, which resembles ordinary twine, is said to be made of wild hemp. The arrows are 40 inches in length. The shafts are made of hickory wood and have conical points. Stone and metal points are not used, as the country abounds in small game only, and heavy points are considered unnecessary. In trimming the arrow two feathers of the wild turkey are used; these are close clipped and fastened with sinew.

63057. Blow-gun used by the Cherokees to kill small game. This specimen is 7 feet in length, and is made of a large cane, probably the *Arundinaria macrosperma*. These guns are made from 5 to 15 feet in length, the diameter in large specimens reaching 1½ inches.

63058. Arrows used with the blow-gun. The shafts, which are made of hickory wood, are 2 feet in length and very slender. The shooting end has a conical point; the feather end is dressed with thistle-down, tied on in overlapping layers with thread or sinew. The tip of down completely fills the barrel of the gun; and the arrow, when inserted in the larger end and blown with a strong puff, has a remarkable carrying and penetrating power.

63085. Thistle-heads, probably the *Onicus lanceolatus*, from which the down is obtained in preparing the arrows of the blow-gun.

63061. Ball-sticks or racquets made of hickory wood. Rods of this tough wood, about 7 feet long, are dressed to the proper shape, the ends having a semicircular section, the middle part being flat. Each is bent and the ends united to form a handle, leaving a pear-shaped loop 6 inches in width by about 12 in length, which is filled with a network of leather or bark strings sufficiently close to hold the ball.

63061. Ball, 1½ inches in diameter, covered with buckskin, used with the racquets in playing the celebrated ball game of the Cherokee, Choctaw, Creek, and Seminole Indians.

### ANIMAL SUBSTANCES.

63071. Shell, probably a *Unio*, used by potters to scrape the surface of clay vessels; seen in use.

63081. Comb made of horn. The teeth are 2 inches in length, and have been made with a saw. It is used in dressing the hair.

63085. Charm made of feathers and snake-rattles; worn on the head or on some part of the costume.

63082. Awl of iron set in a handle of deer's horn.

## COLLECTIONS FROM COCKE COUNTY, TENNESSEE.

### FROM FIELDS NEAR NEWPORT.

#### ARTICLES OF STONE.

62752. Grooved ax, 8 inches in length, 3½ in width, and about 1 in thickness; one side is quite flat, the other convex. The material is a banded schistose slate.

62758. A fine specimen of grooved ax, 7 inches in length, 4 in width, and 1½ in thickness. The groove is wide and shallow, and is bordered by two narrow ridges, which are in sharp relief all the way around. The material appears to be a greenish-gray diorite.

62759. A grooved ax, 6 inches long, 3½ inches wide, and 1 inch thick. This specimen is similar to the preceding, the groove being deeper on the lateral edges of the implement, and the upper end less prominent. It is made of a fine-grained gray sandstone.

62753. Fragment of a grooved ax, of gray slate. The groove is shallow and irregular.

62754. Celt of compact gray sandstone, somewhat chipped at the ends. It is 6½ inches in length by 2½ in width and 1½ in thickness. One face is flat, the other convex. The sides are nearly parallel. A transverse section would be sub rectangular.

62755. Fragment of celt, 3 inches in length by 2 in width and about 1½ in thickness. The material is a fine grained sandstone or a diorite.

62756. A long, slender celt, very carefully finished, 7 inches in length, 2 in width, and less than 1 in thickness. The material is a very compact gray slate. It has apparently been recently used as a scythe-stone by some harvester.

62757. Fragment of a small, narrow celt, both ends of which are lost. Material, gray diorite.

62760. Heavy celt of gray diorite, 8 inches in length by 3 in width and 2½ in thickness.

62762. A pestle of gray diorite, with enlarged base and tapering top, 5½ inches in length and 3 inches in diameter at the base.

62751. A pestle of banded schistose slate, 15 inches in length, and 2½ inches in diameter in the middle, tapering symmetrically toward the ends, which terminate in rounded points.

62763. A ceremonial (?) stone resembling somewhat a small broad-bladed pick, the outline being nearly semicircular. It is pierced as a pick is pierced for the insertion of a handle. It is 2½ inches in length, 1½ in width, and three-fourths of an inch in thickness. The material is a soft greenish mottled serpentine, or serpentinoid limestone. Fig. 116.

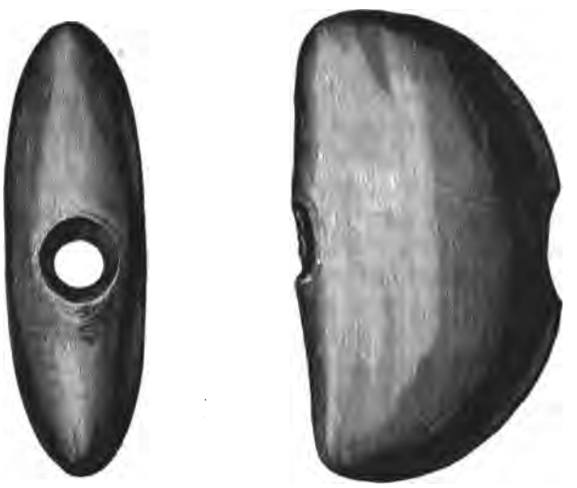

FIG. 116.

62761. A pierced tablet of gray slate, 4½ inches long, 1½ inches wide, and half an inch thick. The two perforations are 2½ inches apart; they have been bored from opposite sides, and show no evidence of use. Nine notches have been cut in one end of the tablet. It has been much injured by recent use as a whetstone.

62764. Cup stone of rough sandstone, having seventeen shallow cup-like depressions, from 1 to 2 inches in diameter. The stone is of irregular outline, about 10 inches in diameter and 4 in thickness.

62765. A large pipe of gray steatite; the bowl is square and about 3 inches in length by 1 in diameter. The stem end is 4 inches in length and three-fourths of an inch in diameter. The bowl has a deep, conical excavation. The same is true of the stem-end also.

## MOUND AT THE JUNCTION OF THE PIGEON AND FRENCH BROAD RIVERS.

### ARTICLES OF CLAY.

62870. The mound from which these fragments were obtained was located 3 miles from Newport. It was 12 feet square and 6 feet high. The original height was probably much greater. The pottery was mixed with ashes and *débris* of what appeared to be three fire-places. No human remains were found. The fragments are not numerous, nor do they indicate a great variety in form. There is, however, considerable variety in decoration.

*Material.*—The clay is generally gray or dark-reddish gray in the mass, and is apparently quite siliceous or sandy, numerous grains of quartz being visible. There is generally a sprinkling of finely-powdered mica, but no shell matter can be detected. When much weathered the surface is quite gritty.

*Form.*—The leading form is a round-bodied, pot-shaped vase. There is one small hemispherical bowl. The outlines have been quite symmetrical. The mouths of the pots are wide, and the necks deeply constricted. The lip or rim exhibits a number of novel features. That of the larger specimen, of which a considerable segment remains, is furnished on the upper edge with a deep channel, nearly one-half an inch wide, and more than one fourth of an inch deep. First section, Fig. 117. Others have a peculiar thickening of the rim, a sort of collar being added to the outside. This is about 1 inch in width, and is thicker below, giving a triangular section. Third section, Fig. 117.

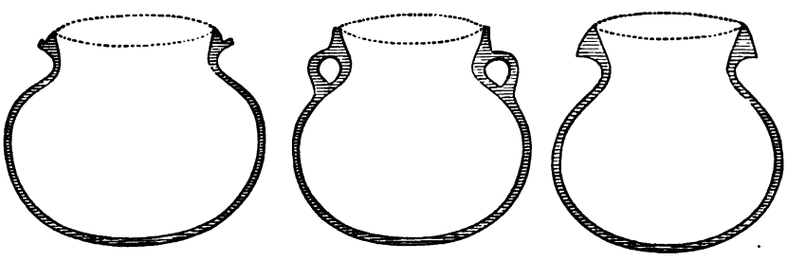

FIG. 117.

The walls of the vessels are usually quite thin. The bottoms were probably round, or nearly so. No fragments, however, of the lower parts of the vessels were collected. There is but one example of handle, and this presents no unusual features. Middle section, Fig. 117.

*Ornamentation.*—The ornamentation is in some respects novel. The double or channeled rim of the larger specimen, the mouth of which has been 13 or 14 inches in diameter, is embellished with a line of flutings, which seem to be the impressions of a hollow bone or reed.

The whole exterior surface is embellished with a most elaborate ornamental design, which resembles the imprint of some woven fabric. If a woven fabric has not been used, a pliable stamp, producing the effect of a fabric, has been resorted to. The fact that the sharply concave portions of the neck are marked with as much regularity as the convex body of the vessel, precludes the idea of the use of a solid or non-elastic stamp.

The pattern consists of groups of parallel indented lines, arranged at right angles with one another, the puzzling feature being that there is no evidence of the passing of the threads or fillets over or under each other, such as would be seen if a woven fabric had been used. The outer surface of the triangular collar peculiar to many of the pots has been decorated with a herring-bone pattern, made by impressing a sharp implement. The handle in one case is similarly ornamented. This handle has been added *after* the figure previously described was impressed upon the neck of the vessel. One small fragment shows another style of indented or stamped pattern, which consists of series of straight and curved lines, such as are characteristic of many of the vessels obtained from the Gulf States.

A small fragment of coal-black ware is entirely smooth on the outside, and indicates an unusually well finished and symmetrical vessel. Another shows the impression of basket-work, in which a wide fillet or splint has served as the warp and a small twisted cord as the woof. One interesting feature of this vessel is that from certain impressions on the raised ridges we discover that the vessel has been taken from the net-mold while still in a plastic state.

Still another reddish porous fragment has a square rim, which is ornamented with a series of annular indentations.

## COLLECTIONS FROM SEVIER COUNTY, TENNESSEE.

### THE McMAHAN MOUND.

On the west fork of the Little Pigeon River, at Sevierville, on a rich bottom, 125 yards from the river, is a celebrated mound, the owners of which have for years refused to have it opened.

Mr. Palmer spent several days in trying to obtain permission to open it, and was about leaving in despair, when the owners finally yielded, not, however, without requiring a number of concessions on the part of the collector, which concessions were put in the form of a legal document.

This mound is 16 feet high and 240 feet in circumference.

Three feet below the surface, a stratum of burnt clay, 15 feet wide by 30 long, was reached. This has probably formed part of the roof of a dwelling.

Beneath this was a bed of charcoal 4 inches thick. In this bed remnants of cedar posts from 2 to 4 inches thick and 1 to 2 feet in length were found.

Below this was a stratum of ashes, covering a limited area to the depth of 4 feet. Surrounding this, the earth contained fragments of numerous articles used by the inhabitants, while beneath came 4½ feet of earth, in which numerous skeletons had been deposited.

The bodies had been interred without order, and the bones were so intermingled, and so far decayed, that no complete skeletons could be collected. Beneath the layer of bones came a second deposit of ashes, 2 feet thick by 2½ feet in diameter, and beneath this a mass of red clay, 18 inches in thickness. In the earth surrounding the ashes and clay, a number of skeletons were found; these were in such an advanced stage of decomposition that only a few fragments of skulls could be preserved.

Three feet below the second layer of bones, the undisturbed soil was reached.

Two boxes of bones were collected, the well-preserved crania numbering about twenty.

A great many interesting specimens of the implements, utensils, and ornaments of the mound-builders were obtained.

The following catalogue includes everything of interest:

#### ARTICLES OF STONE.

62787, 62792, 62778, 62769, 62784, 62788. Numerous specimens of arrow-points, flakes, cores, and rough masses of gray and black chalcedony, obtained partly from the mound, and partly from the soil surrounding it.

62793. A somewhat conical object of black compact graphite. The flatish base is rubbed off in an irregular way, as if in grinding down for use as a pigment.

62790. Fragment of hammerstone of gray micaceous sandstone, 5 inches long by 3 inches in diameter. It was found associated with the upper layer of skeletons.

62808. Pipe carved from gray marble. The bowl is symmetrically shaped, and resembles a common clay pipe. It is about 1½ inches in height and 1 in diameter. The stem part is about one-fourth of an inch in length. Found with the upper layer of skeletons.

62786. A perforated stone tube, 1¼ inches long and three-fourths of an inch in diameter. It is probably the upper part of a pipe bowl.

62794. A large number of minute quartz pebbles, probably used in a rattle or in playing some game of chance. Found with the skeletons in the mound.

62798. Three glass beads, found 4 feet below the surface of the mound. One is a bright blue bead of translucent glass. One is opaque, resembling porcelain. The third is of blue-gray glass, and has three longitudinal stripes of brown, underlaid by bands of white. All are cylindrical in shape, and are from three-eighths to half an inch in length, and about one-fourth of an inch in diameter.

### ARTICLES OF CLAY.

The collection of pottery from this mound is of much interest. There is but one entire vessel, but the fragments are so plentiful and well preserved that many interesting forms can be restored, and a very good idea of the ceramic work of this locality be formed.

*Form.*—I have spent much time in the examination of these fragments, and have assigned each to the form of vessel to which it belonged. Where large pieces are preserved, especially if the rim is included, we have little trouble in reconstructing the entire vessel, without fear of being seriously wrong. The lower parts of the bodies of all forms are round or slightly flattened, and but a small fragment of the rim is needed to tell whether the vessel was a bottle, pot, or bowl.

I find, however, that the forms merge into each other in such a way that a complete graduated series can be found. Of first importance, are the round or globular vases with more or less constricted necks.

*Ornamentation.*—The inside of all forms is plain with the exception of accidental markings of the fingers. The rim is square, sharp, or round on the edge, and sometimes slightly enlarged or beaded on the outer margin. A collar is attached to many forms, which at the lower edge overhangs. It is added to the body with the rim, or as a strip after-

ward attached. It is often notched or indented with a stick, bone, or reed, or with the fingers.

The necks of vases and pot-shaped vessels have a great variety of handles, knobs, and ornaments. Some of the latter seem to be atrophied handles. In some cases a low horizontal ridge, from 1 to 4 or more inches in length is placed near the rim, in place of the continuous collar. In other cases a narrow, crescent-shaped ridge is attached, the points reaching down on the shoulder, the arch lying upon the neck. Still others have one or more handles which connect the rim with the neck or shoulder of the vessel, leaving a round or oblong passage for a cord or vine.

These handles were added after the vessel was completed. They are never ornamented. In one case an arched handle, like the handle of a basket, connects the opposite sides of the rim. This is the only entire

FIG. 118.

vessel recovered from the mound. It was associated with the upper layer of skeletons. Diameter 4½ inches. Fig. 118.

The body of these vessels is sometimes quite plain, but is more frequently covered with cord markings. These, with one or two exceptions, seem to be made by a series of fine cords, approximately parallel, but without cross-threads of any kind. There is little uniformity of arrangement. In the upper part, and about the base of the neck, the indented lines are generally vertical. On the bottom they are quite irregular, as if the vessel, in making, had been rolled about on a piece of netting or coarse cloth. The cords have been about the size of the ordinary cotton cord used by mrchants. One exception is seen in a fragment of a large, rudely-made vase, in which we have the impression of a fabric,

the warp of which, whether wood or cord, has consisted of fillets more than one-fourth of an inch in width, the woof being fine cord.

This is what is frequently spoken of as the ear-of-corn impression. No incised or excavated lines have been noticed in these fragments of pot-shaped vessels. Some of the most elegant vessels are without upright necks. The upper or incurved surface of the body is approximately flat, forming, with the lower part of the body a more or less sharp peripheral angle. The base is rounded, and, so far as we can judge from the examples, the bottom is slightly flattened. Vessels having vertical or flaring rims are generally somewhat more shallow.

The incurved upper surface is often tastefully ornamented with patterns of incised or excavated lines which are arranged in groups, in vertical or oblique positions, or encircle the vessel parallel with the border. One specimen has a row of stamped circles, made by a reed or hollow bone.

Bowls of the ordinary shape are variously decorated. In one case we have on the outside of the rim, and projecting slightly above it, a rudely-modeled grotesque face. A notched fillet passes around the rim, near the lip, connecting with the sides of this head.

In another case a rude node is added to the rim. The only bowl having a flaring rim is without ornament.

We have only one fragment of a bowl in which the body has been marked with cords.

*Composition.*—The clay used in the pottery from this mound is generally fine in texture, and of a light-gray color. Many of the fragments have been blackened by burning subsequently to their original firing, and some may have been originally blackened with graphite. The prevailing colors seen in the fragments are yellowish and reddish grays. The percentage of powdered shell used in tempering has usually been very large, forming at times at least half the mass. The flakes of shell are very coarse, being often as much as one-fourth of an inch in diameter. In many cases they have been destroyed by burning, or have dropped out from decay, leaving a deeply pitted surface.

*Pipes.*—There are a number of pipes in the collection, most of which were found near the surface of the mound. In some cases they resemble modern forms very closely. The most striking example is made of a fine-grained clay, without visible admixture of tempering material. The color is a reddish gray. It is neatly and symmetrically formed, the surface being finished by polishing with a smooth, hard implement, and shaving with a knife. The bowl is 2 inches high, and the rim is bell-shaped above, with a smooth, flat lip, one-fourth of an inch wide. The diameter of the opening is nearly 2 inches. The base is conical. The stem part is one-half an inch long and one-half an inch in diameter. The bowl and stem are both conically excavated.

Another specimen is made of clay mixed with powdered shell. The bowl is cylindrical, being a little larger at the rim, which is ornamented

with rows of punctures. The elbow is ornamented by a rosette of indented lines. The mouth piece has been broken away.

OBJECTS OF METAL.

62797. One of the most instructive finds in this mound is a pair of brass pins, of undoubted European manufacture. The collector makes the statement, with entire confidence in its correctness, that they had been encased in the earth at the time of the interment of the bodies. One was associated with the upper and the other with the lower layer of bones. In size and shape they resemble our ordinary brass toilet pin. The head is formed of a spiral coil of wire, the diameter of which is about one-half that of the shaft of the pin. It is also stated by the collector that an iron bolt was found in the lower stratum of bones. This object was unfortunately lost.

62795. A small brass cylinder, found 3 feet 7 inches below the surface of the mound. The thin sheet of which the coil is made is about 1 inch square. The edges are uneven. It was probably used as a bead.

OBJECTS OF SHELL.

Few mounds have rivaled this in its wealth of shell ornaments. Engraved gorgets cut from the body of the *Busycon perversum* and large pins from the columellæ of the same shell are especially numerous and well-preserved. Large numbers of beads and unworked shells were also found. All were intimately associated with the skeletons.

While many of the specimens are well-preserved, we find that many are in an advanced stage of decay, and unless most carefully handled, crumble to powder.

Similar shell ornaments are found in mounds in other parts of Tennessee, as well as in neighboring States. These have been pretty fully described in the Second Annual Report.

62830–62839. These pins are all made from the *Busycon perversum*. The entire specimens range from 3 to 6 inches in length; two are fragmentary, having lost their points by decay. The heads are from one-half to 1 inch in length, and are generally less than 1 inch in diameter. They are somewhat varied in shape, some being cylindrical, others being conical above. The shaft is pretty evenly rounded, but is seldom symmetrical or straight. It is rarely above one-half an inch in diameter, and tapers gradually to a more or less rounded point. The groove of the canal shows distinctly in all the heads, and may often be traced far down the shaft. In a number of cases the surface retains the fine polish of the newly-finished object, but it is usually somewhat weathered, and frequently

discolored or chalky. These specimens were found in the mounds along with deposits of human remains, and generally in close proximity to the head; this fact suggests their use as ornaments for the hair.

62840–62843. A number of saucer-shaped shell gorgets, the upper edge being somewhat straightened, the result of the natural limit of the body of the shell. Two small holes, for suspension occur near the upper margin. The diameter ranges from 3 to 6 inches.

FIG. 119.

FIG. 120.

In studying the design the attention is first attracted by an eye-like figure near the left border. This is formed of a series of concentric circles, and is partially inclosed by a looped band about one-eighth of an inch in width, which opens downward to the left. This band is occupied by a series of conical dots or depressions, the number of which varies in the different speci-

mens. The part of the figure inclosed by this band represents the head and neck of the serpent. To the right of the eye we have the mouth, which is usually shown in profile, the upper jaw being turned upward exhibiting a double row of notches or teeth. The body encircles the head in a single coil, which appears from beneath the neck on the right, passes around the front of the head, and terminates at the back in a pointed tail armed with well-defined rattles. The spots and scales of the serpent are represented in a highly conventionalized manner.

FIG. 121.

FIG. 122.

Shell gorgets with engraved designs representing the rattlesnake.

62841–62845. The handsome specimen given in Fig. 124 is in a very good state of preservation. It is a deep, somewhat oval plate, made from a *Busycon perversum*. The surface is nicely polished and the margins neatly beveled. The marginal zone is less than half an inch wide and contains at the upper edge two perforations, which have been considerably abraded by the cord of suspension. Four long curved slits or perforations almost sever the central design from the rim; the four

narrow segments that remain are each ornamented with a single conical pit. The serpent is very neatly engraved and belongs to the chevroned variety. The eye is large and the neck is ornamented with a single rectangular intaglio figure. The mouth is more than usually well defined. The upper jaw is turned abruptly backward and is ornamented with lines peculiar to this variety of the designs.

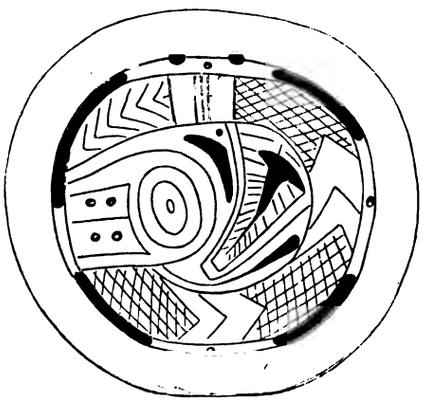

FIG. 123. (62841.)

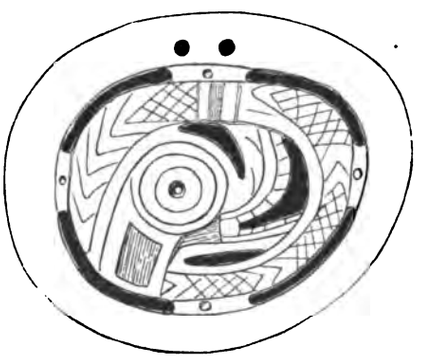

FIG. 124. (62845.)

Shell gorgets with engraved designs representing the rattlesnake.

The body of the serpent opposite the perforations for suspension is interrupted by a rather mysterious cross band, consisting of one broad and two narrow lines. As this is a feature common to many specimens, it probably had some important office or significance.

62847–62848. Mask-like shell ornaments. By a combination of engraving and sculpture a rude resemblance to the human features is produced. The objects are generally made from large pear-

shaped sections of the lower whorl of marine univalves. The lower portion, which represents the neck and chin, is cut from the somewhat constricted part near the base of the shell,

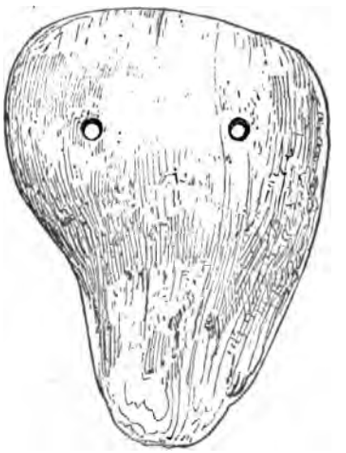

FIG. 125. (62348.) Mask-like object of shell.

while the broad outline of the head reaches the first suture at the noded shoulder of the body whorl. The simplest form is shown in Fig. 125. A more elaborate form is given in Fig. 126.

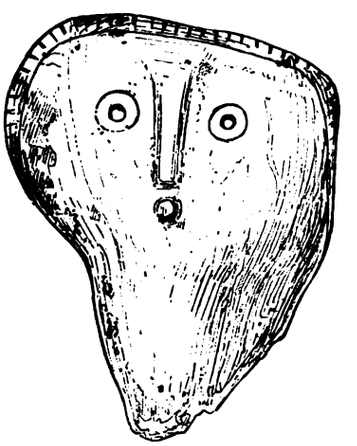

FIG. 126. (62347.) Mask-like object of shell.

These objects are especially numerous in the mounds of Tennessee, but their range is quite wide, examples having been reported from Kentucky, Virginia, Illinois, Missouri, and Arkansas, and smaller ones of a somewhat different type from New York. In size they range from 2 to 10 inches in length, the width being considerably less. They are generally found associated with human remains in such a way

as to suggest their use as ornaments for the head or neck. There are, however, no holes for suspension except those made to represent the eyes, and these, so far as I have observed, show no abrasion by a cord of suspension. Their shape suggests the idea that they may have been used as masks, after the manner of metal masks by some of the oriental nations.

FIG. 127.—Shell gorget with engraving of a curious human figure.

62846. Engraved shell, Fig. 127. This very interesting object has been fully described in the Second Annual Report of the Bureau. The figure is so obscure that considerable study is necessary in making it out.

62930. Engraved shell, Fig. 128. This remarkable specimen has already been described in the Second Annual Report of the Bureau. The engraved design is certainly of a very high order of merit, and suggests the work of the ancient Mexicans.

62816–62822, 62824, 62826, 62828, 62829. Shell beads discoidal and cylindrical in form, made chiefly from the columellæ and walls of marine univalves.

62825. Shell bead made by grinding off the apex of a large *Oliva biplicata.* (?)

62827. Beads made from *Marginella* (?) shells.

62825, 62827, 62850–62857, 62782. Species of shell found in the mound, some with the skeletons, others near the surface.

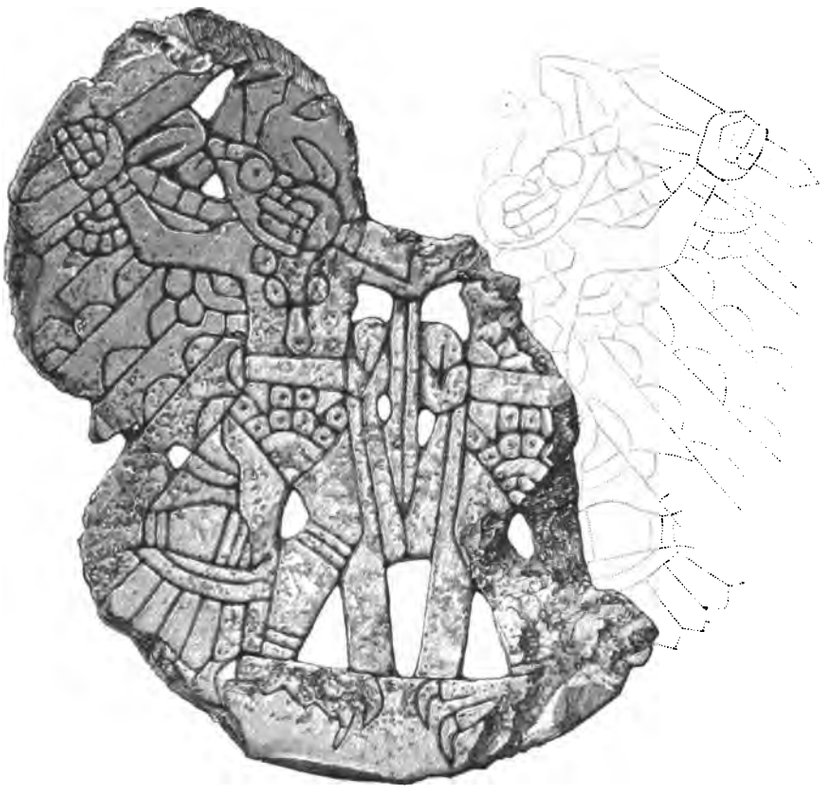

FIG. 128.—Shell gorget with engraved design representing two fighting figures.

The following genera and species are provisionally determined:

*Unio multiplicatus.*
*Unio ovatus.*
*Unio crassidens.*
*Unio pictorum.*
*Marginella* (?).
*Oliva* (?).
*Io spinosa.*
*Trypanostoma anthonyi.*
*Anculosa subglobosa.*
*Busycon perversum.*

62823. A tooth-shaped fresh-water pearl, found with the skeletons.

ANIMAL SUBSTANCES.

62861. Fragments of deer-horn found near the surface of the mound.

62858. An implement of unusual form, made from a flat piece of bone, found with the skeletons in the mound.

62859, 62860. Bone implements, needles and perforators, some of which are well preserved and retain the original polish; others are in a very advanced stage of decay.

Three boxes of human bones (not numbered).

## FROM THE FIELDS AT SEVIERVILLE.

ARTICLES OF STONE.

62770. A small grooved ax, formed of a coarse textured stone, resembling diorite. It is 4½ inches in length and 2½ in width. The head is rounded and the cutting edge much battered. The groove is wide and shallow, and the bordering ridges prominent. The blade thins out quite abruptly. Presented by J. B. Emert.

62772. A celt 6¾ inches long, 2½ inches wide, and 1 inch thick. The material is a compact, blue-gray, banded slate. The sides are straight and a transverse section is somewhat rectangular. Both edges are sharpened, and are very neatly beveled and polished. Presented by W. P. Mitchell.

62771. A small celt of compact greenish slate; one face is flat, the other convex. It is neatly made and perfectly preserved, the broader end being oblique and sharp. It is 3⅛ inches in length.

62777. A rude, much-battered celt of coarse sandstone or diorite. It is 4 inches in length by 2 in width near the cutting edge. The top is somewhat conical.

62774. A large unsymmetrical celt made of coarse yellowish sandstone; one side is much battered. The cutting edge is round and dull. It is 9 inches in length by 5 in width near the broad end and is 1½ inches thick.

62785. A knife-blade-shaped object, apparently a fragment of a winged ceremonial stone. The whole surface is smooth and shows no evidence of use. It is made of fine-grained gray slate. It is 2 inches in length by five-eighths in width.

62775. A bell-shaped pestle made of yellowish gray quartzite. The surface has been evenly roughened by picking, but has become slightly polished on parts most exposed when in use. The base part is subrectangular in section, and the bottom is slightly but evenly convex. The upper part, which has been shaped for convenient grasping by the hand, is evenly

rounded at the top. Height, 4½ inches; width of base, 3½ inches.

62766. A well-formed globe of gritty sandstone. The surface is roughened or granular. It is 2½ inches in diameter.

62789. Portion of an oblong hammer stone, 4 inches in length by 3 in diameter in the middle part. One end has been much reduced by use. It is made of some dark, much decomposed, crystalline rock.

62768. A symmetrical sandstone ring, 2 inches in diameter and three-fourths of an inch in thickness. The perforation is about five-eighths of an inch in diameter. The surface is roughened by picking.

FIG. 129.

62767. A symmetrical, neatly finished disk of light gray quartzite. It is 4¼ inches in diameter and 1¼ inches in thickness at the circumference, and less than 1 inch thick at the center.

62869. An hour-glass shaped tube made of gray hydro-mica schist, which resembles very compact steatite. It is 5½ inches long, 2 inches in diameter at the widest part and 1¼ inches at the narrowest part. The most restricted part near the middle is girdled by a ridge or ring, on the circumference of which seventy or eighty shallow notches have been cut.

The perforation is much enlarged at the ends, giving cup-like cavities. The walls are thin near the ends and quite thick near the middle, the passage being hardly more than one-quarter of an inch in diameter. The markings on the inside indicate that the excavation has been made by a gouging process, rather than by the use of a rotary perforator.

FIG. 130.

62776. A boat-shaped ceremonial stone of banded slate, 3 inches long, 1 inch wide, and 1 inch deep. From the side the outline is triangular, the two lines of the keel forming almost a right angle. From the top the outline is a long, pointed oval, as seen in the illustration, Fig. 131.

FIG. 131.

The trough-shaped excavation is more rounded in outline, and is three-fourths of an inch in depth. Perforations have been made near the ends of this trough; these seem to be somewhat abraded on the outside by a cord of suspension or attachment which has passed between them along a groove in the apex or angle of the keel.

62868 An amulet or charm of dark-greenish rock, probably a serpentine, carved to represent a bird's head. The more highly

FIG. 132.

polished parts are quite dark, while freshly cut lines are whitish. The head is graphically represented, the bill, the eye, and nostril being well shown. A stand-like base takes the place of the body of the bird. Around this, near the bottom, a groove has been cut for the purpose of attaching a string or securing a handle. In dressing the surface some implement has been used that has left file-like scratches. Fig. 132 represents this object natural size.

62773. Fragment of a stone disk or wheel that has lines cut upon it resembling in arrangement the grooves of an ordinary millstone. Diameter, 6 inches; thickness, 2 inches. This is probably not an aboriginal work.

FIG. 133.

63186. A banner-stone of unusual shape, made of gray slate. The cut, Fig. 133, represents this object three-fourths natural size.

The perforation is one-half an inch in diameter, and is quite symmetrical. The entire surface is well polished.

### ARTICLES OF CLAY.

A few specimens of potsherds were collected from the fields about Sevierville.

Most of these are identical in every way with the pottery of the mound, but three examples are of a totally different type. The material of these is a fine sandy clay, tempered with a large percentage of finely pulverized mica.

The forms of the vessels cannot be made out. The outer surfaces were ornamented by a stamped pattern of small square or lozenge-shaped figures, a number of these together were apparently formed by a single stamp.

Among the fragments we have half a dozen disks, from 1 to 2 inches in diameter, worked from ordinary potsherds. A small rudely modeled figure of a bird was also found with these fragments. There were also masses of indurated clay, which seem to have been used for chinking purposes.

## COLLECTIONS FROM ROANE COUNTY, TENNESSEE.

### MOUND AT TAYLOR'S BEND.

This mound is situated three hundred and fifty yards from the French Broad River, on the farm of Mr. William Harris.

It is 10 feet high and nearly 50 feet in circumference. Its summit has been cultivated for many years, and the height has doubtless been much reduced. Immediately under the surface soil a heavy bed of ashes and charcoal was reached, which at the border of the mound was only a few inches thick, but at the center was about 3 feet thick.

In this stratum were found a few implements, and fragments of pottery, and two very much decayed skeletons. A part of one cranium was preserved. The mound beneath this stratum was composed chiefly of loam, with some sand in the center, and contained nothing of interest.

#### ARTICLES OF STONE.

62885. A needle-like implement, made of a soft black stone that may be cannel coal. It is 3½ inches in length, but is not entire. The shaft is a little more than one-fourth of an inch in diameter, is nearly round, and tapers to a symmetrical point. The surface is highly polished. It was found in the stratum of ashes.

#### ARTICLES OF CLAY.

62890, 62892–6. A considerable number of fragments of pottery was found in the stratum of ashes.

*Form.*—Vases of the wide-mouthed, round-bodied variety are represented, also a number of hemispherical bowls. One large fragment representing a vessel with rounded bottom was found.

*Size.*—The pot-like vases have been quite large, the mouths being as much as 14 inches in diameter. The larger bowls have been 10 inches or more in diameter. Others are smaller. The walls of some of the larger vessels have been half an inch in thickness.

*Material.*—Classified by material, there are two varieties, one is composed of the usual clay and pulverized shells, the latter being coarse and exceedingly plentiful; the other has no shell material, but in its place an admixture of sand and small quartz pebbles.

*Ornamentation.*—The inside is plain as usual, and many of the fragments have no exterior ornament. There are two varieties of surface markings; one consists of impressions of basket work, which indicate a broad series of fillets bound together by small twisted cords of grass or bark; the other appears to have been made by an open net-work of fine cords, which have been quite irregularly arranged.

#### OBJECTS OF SHELL.

62898. A shell pin made from the columella of a large univalve. The original polish is still preserved. The head is round and small, and the shaft 2 inches in length. Found in the stratum of ashes.

62899. Two species of shells, *Io spinosa* and *Pleurocera conradii* (?), obtained from the stratum of ashes.

## COLLECTIONS FROM THE FIELDS AT TAYLOR'S BEND.

#### ARTICLES OF STONE.

62883. A lot of arrow points, spear points, and knives, having a wide range of shape and size. A serrated specimen is 3 inches in length, and is made of yellowish striped chalcedony. One is made of white translucent quartz, and others of dark gray and black chalcedony.

62881. A stone disk, 1¼ inches in diameter and three-eighths of an inch thick. It is of gray sandstone, nicely smoothed. The edge is rounded and the sides slightly convex.

62882. Two stone disks similar to the preceding, but smaller.

62878. A small, thick, nearly symmetrical celt, 2½ inches in length, 1½ inches in width, and one-half of an inch thick. The edge is rounded in outline and well sharpened. The beveled areas are narrow and stand at an angle of 30° with each other. It is widest at the edge, tapering above to a conical point. The material is apparently a compact greenish diorite.

62877. A small celt similar to the preceding in form and material. It is 3¼ inches long, and 1¾ inches in width near the cutting edge, which is considerably battered.

62875. A curved celt of considerable interest, made of a greenish diorite. It is 8 inches in length, 2½ inches wide near the cutting edge, and about 1 inch thick. It tapers toward the apex to 1½ inches in width. A transverse section would be a sharp oval. A longitudinal section showing the thickness of the implement gives a bow-like figure, the median line of which would deflect nearly half an inch from a straight line.

62876. A celt, 3½ inches in length, of the usual form, made of a greenish diorite.

62874. A grooved ax of gray sandstone, 5 inches long, 3 inches wide, and 1 inch thick. The groove is deep and well rounded,

FIG. 134.

and has two bordering ridges in high relief. The head is low and conical, and the blade narrow and rectangular. The surface has originally been quite smooth, but is now somewhat battered.

FIG. 135.

62871. A cylindrical pestle of gray diorite (?), 11 inches long and 2 inches in diameter. The general surface is rough, the points being smoothed by use.

62879. A perforated tablet, made of gray, chloritic schist, 2½ inches long by 1½ inches broad, illustrated in Fig. 134. The sides are notched in a way that gives a dumb-bell like outline. The ends are almost square. Series of notches have been cut in the terminal edges. On one of the lateral margins rude notches and zigzag lines have been engraved. In the middle of the plate there is a circular perforation one-fourth of an inch in diameter. Midway between this and the ends are two other perforations, one being circular and one-eighth of an inch in diameter, and the other lozenge or diamond shaped and nearly one-fourth of an inch in width. These show no evidence of wear. The surface is uneven, though somewhat polished. It has probably been used for straightening arrow shafts and shaping strings.

62880. Fragment of a perforated tablet carved from gray slate. It has been broken transversely near the middle, through a perforation which has been about one-eighth of an inch in diameter. The remnant is 2 inches in length and 1½ inches in width at the perforation. One side is plain, the other has a design of plain and zigzag lines. The edges are beveled and notched. See Fig. 135.

## VICINITY OF KINGSTON.

On the farm of Mr. M. Biss, three miles from Kingston, on the Tennessee River, a mound was opened which was so located as to overlook the river, and at the same time guard the approach from two pieces of projecting wood. It was 11 feet high, 29 feet wide on the top, and 45 feet in diameter at the base. It was composed entirely of clay.

Three feet from the surface six very much decayed skeletons were found, no parts of which could be preserved. The bodies seem to have been deposited without definite order.

No objects of art were obtained.

Opposite Kingston, on the Clinch River, are three mounds, located on the farm of T. N. Clark. They are all small, and, with the exception of two much decayed skeletons and a single arrow point, contained nothing of interest.

On the farm of S. P. Evans, three miles below Kingston, are three groups of mounds. The first contains five mounds; the second, a little higher up, has the same number, while the third has but two. They are all built of clay, and seem to be without remains of any sort.

### MOUND AT NILES' FERRY.

On the farm of J. W. Niles, at this point, is a large mound that has the appearance of a Creek or Cherokee ball-ground. It was flat on the top, and had an area of 1¾ acres. The height was 15 feet. In outline it was somewhat triangular. This mound was also constructed of clay, and contained nothing of interest. In the fields, near by, human bones, pottery, stone implements, beads, etc., are frequently plowed up. From this locality the following specimens were collected:

62957. Arrow heads and knives of gray and black chalcedony.

62955. Unworked Unio shells.

62956. A number of shell beads of usual size and form.

### MOUNDS NEAR PAINT ROCK FERRY.

About three hundred yards from the Tennessee River, at Paint Rock Ferry, is a large mound 40 feet in height, and covering an area of about about two acres.

Permission could not be obtained to open the mound, on account of the crop of corn that covered it. Near its base, on opposite sides, were two smaller mounds. One of these was 5 feet high and 10 in diameter, and contained a stone grave. The body which it contained had been laid on the ground and covered a foot deep with earth. A flat rock had been laid upon this, and slabs of limestone set on edge all around. The inclosed space was 4 feet in width by 5 in length. Earth had been used to cover the cist and form the mound.

About this mound were scattered many slabs of stone which had been plowed up during previous years; and it is stated that human bones and various objects of art have, at different times, been brought to light.

A short distance from the large mound, and near the river bank, is another mound on which a barn has been built.

Several hundred yards from the river, in a meadow, is a third mound, less than half as large as that first mentioned. The owner would not allow it to be disturbed. Still another mound, near by, was oval in outline, 28 feet long, by 20 wide, and 12 high. It was composed of clay and contained nothing but a few pieces of pottery.

62939, 62940, 62945. Fragments of pottery from the mounds at Paint Rock Ferry.

#### OBJECTS OF SHELL.

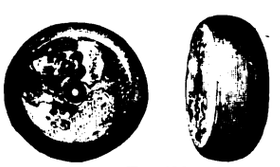

FIG. 136.

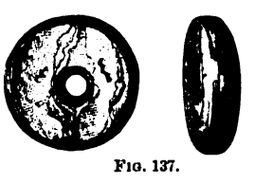

FIG. 137.

62935, 62937. Shell beads, buttons, and pendants, made from marine shells. A neatly made pendant is 1 inch in diameter and one-sixth of an inch thick. Near the edge are two small perforations for suspension, and at the center is a conical pit, encircled by a shallow incised line. Beside this, there are a number of buttons of similar shape, which have single perforations at the center. Some of the smaller beads seem to have been painted red. Figs. 136, 137, and 138.

62936. Fragment of a large *Busycon perversum*.

62942. Teeth of the bear, and possibly of the horse found near the surface of one of the mounds.

FIG. 138.

## COLLECTIONS FROM JEFFERSON COUNTY.

### MOUND ON FAIN'S ISLAND.

This mound is located on the east end of the island. Although it has been under cultivation for many years, it is still 10 feet in height. The circumference at the base is about 100 feet. Near the surface a bed of burned clay was encountered, in which were many impressions of poles, sticks, and grass. This was probably the remains of the roof of a house, which had been about 16 feet long by 15 feet in width. The bed of clay was about 4 inches thick. Beneath this was a layer of charcoal and ashes, with much charred cane. There were also indications of charred posts, which probably served as supports to the roof. Four feet below the surface were found the remains of thirty-two human skeletons. With the exception of seventeen skulls, none of the bones could be preserved. There seems to have been no regularity in the placing of the bodies.

#### ARTICLES OF CLAY.

The fragments of pottery from this mound are unusually large and well preserved, and exhibit a number of varieties of form and ornamentation.

*Forms.*—The prevailing form is a pot-shaped vase, with wide mouth, and rounded body; the neck is short and straight or but slightly constricted. The handles or ears which connect the upper part of the neck with the shoulder are in some cases as much as 3 inches wide. The bowls are mostly hemispherical, but in a few cases have incurved lips, the shoulder being rounded and the base somewhat flattened. The largest specimens have been 11 or 12 inches in diameter. The vases have been somwhat larger.

*Material.*—Classified by material, there seem to be two varieties, one with a very large percentage of coarsely pulverized shell material, the other without visible *dégraissant.* The clay is usually fine and apparently without admixture of sand or other impurities. A little comminuted mica may be seen in some cases.

*Color.*—The prevailing color is a reddish gray, more or less blackened by use. A remarkable variety has a bright red surface, the mass being gray.

*Ornamentation.*—The ornamentation consists of cord and net impressions, incised lines, stamped figures, indented fillets, and life and fanciful forms modeled in relief.

The study of cord impressions is quite interesting. The cords are twisted and as large as medium twine. These cords appear to have

been disconnected, at least, not woven into a fabric, and the impressions are generally nearly vertical about the upper part of the vessel, but below take all positions, the result being a sort of hatching of the lines. This effect may be the result of placing the vessel upon a coarse fabric while the rim was being finished or the handles added.

It seems possible that a loose net of cords, probably with fine cross-threads, is used to suspend the vessel in during the process of modeling. It appears, however, if this has been the case, that the vessel has been taken out of this net before it was burned. Where handles have been added, it will be found that the cord markings have been destroyed by the touch of the fingers. But the body has impressions of the net made after the addition of the handles and ornaments, as the impressions appear on the outside or lower edges of these additions. The lower part of the body may still have been supported by the net during the process of drying; but as some vessels have no cord markings whatever, it is evident that it was not difficult to complete the vessel without the support of the net.

FIG. 139.

By making a clay impression of one of the fragments I have been able to determine the character of the fabric used. It was loosely woven and quite flexible, the clay often receiving finger impressions through it. It was probably made of grasses or the fibre of bark.

Beside the net and cord marks, which may or may not be the result of an attempt at ornament, there are ornaments made of fillets of clay. In a number of cases a comb-like figure made of thin fillets has been added to the shoulder of a vase. In other cases a fillet has been carried around the neck of the vase and indented by the finger or an implement.

The rim of one bowl has been ornamented with three deeply incised or excavated lines, which form a sort of embattled figure about the incurved lip. Another has a series of shallow, vertical, incised lines near the rim, and a circle of annular indentations, three-eighths of an inch in diameter, about one-fourth of an inch from the lip.

There are also various forms of noded ornaments on the rims of bowls. The handles of vases are in a few cases effectively ornamented. In one case the handle has been elaborated into a life form, representing a frog or human figure. The arms are attached to the upper part of the handle and lie extended along the rim. The handle proper represents the body, the breast being protruded. The legs lie flattened out upon the shoulder of the vessel, the feet being bent back beneath the body; height 3½ inches. This vessel is illustrated in Fig. 139.

## FROM THE FIELDS OF FAIN'S ISLAND.

### ARTICLES OF STONE.

62906. A very handsome specimen of grooved ax. It is made of a remarkable variety of porphyritic diorite that resembles breccia.

The matrix has the appearance of a gray speckled quartzite; the angular inclusions being whitish feldspar, with dark-greenish patches of hornblende. The surface is smooth and shows but little wear. The length is 7 inches, the width 4, and the thickness 2 inches. The groove is deep, and has two well-defined bordering ridges. The head is low and rounded, and occupies about one-third of the length of the implement. The blade is well-formed, the sides being parallel or nearly so. The edge is slightly rounded in outline, and is polished and sharp.

62907. A grooved stone ax, 5 inches in length, 4½ inches in width, and 1¼ inches in thickness. The groove is placed as in the preceding example, but has a bordering ridge on the upper side only. The head is very large and narrow. The blade is rectangular in outline, and has a rounded, moderately sharp edge. The material is a compact graphic diorite (?).

62904. A grooved ax, 4 inches in length, 3½ inches in width, and three-fourths of an inch in thickness. The groove, which is well defined, has no lateral ridges. It seems to have been made from a flattish, oval, river pebble.

62902. Fragment of a pierced tablet of slate.

62903. A well shaped disk of translucent quartz, 1¾ inches in diameter and three-fourths of an inch in thickness. The sides are nearly flat, and the edge evenly rounded. The surface is quite smooth.

62905. Steatite pipe found on the surface of the mound. The bowl is about 6 inches in length and 1 inch in thickness. A section is nearly square. The cavities are roughly excavated.

OBJECTS OF SHELL.

62916. Well preserved specimen of *Io spinosa.*

62955. Specimens of *Unio probatus.*

62914. A large specimen of shell pin, made from the columella of a *Busycon perversum.* It is much discolored and in an advanced stage of decay. Length nearly 4 inches. Form as usual.

62913. A shell pin similar to the preceding.

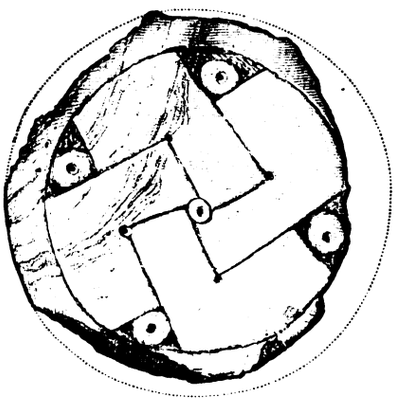

FIG. 140.—Shell gorget with an engraved cross.

62931. A number of large shell beads, made from the columellæ of marine shells. The larger specimens are cylindrical in form, and are 1 inch in length and upwards of 1 inch in diameter.

FIG. 141.—Shell gorget with the engraving of a spider.

62932–62834. Shell beads of various sizes and shapes, made from the columellæ and walls of marine shells.

62928 A shell ornament, on the convex surface of which a very curious ornamental design has been engraved. The design, inclosed by a circle, represents a cross such as would be formed by two rectangular tablets or slips, slit longitudinally and interlaced at right angles to each other. The lines are neatly and deeply incised. The edge of the ornament has been broken away nearly all around. It is represented natural size in the cut. Fig. 140.

62929. This disk is somewhat more convex on the front than is indicated in the engraving. It is 2½ inches in diameter, and is quite thin and fragile, although the surface has not suffered much from decay. The margin is ornamented with twenty-four very neatly-made notches or scallops. Immediately inside the border on the convex side are two incised circles, on the outer of which two small perforations for suspension have been made; inside of these, and less than half an inch from the margin, is a circle of seventeen subtriangular perforations, the inner angle of each being much rounded. Inside of this again is another incised circle, about 1¼ inches in diameter, which incloses the highly conventionalized figure of an insect resembling a spider. The middle segment of the body is nearly round and has near the center a large conical perforation. This round portion corresponds to the thorax of the insect and has four pairs of legs attached to it. It is difficult to distinguish the anterior and posterior extremities of the body. It is probable that the subtriangular figure below is intended for the head, as the two circles with central dots are good representations of eyes. Fig. 141.

### ANIMAL SUBSTANCES.

62910, 62911, 62912. A number of bone implements, including needles, perforators, and paddle-shaped objects, found with the skeletons in the mound.

## COLLECTIONS FROM MISSISSIPPI COUNTY, ARKANSAS.

### PEMISSCOTT MOUND.

On Pemisscott Bay u, 22 miles northwest of Osceola, on the farm of Samuel Hector, is a mound 20 feet in height, with a surface area of about one-fourth of an acre. The sides have been dug into extensively, but the central part remained untouched. It was composed of sand and bluish clay, but contained no remains of interest. It is stated by the proprietor that formerly there were three circular ditches extending around the slopes of the mound. When the surface of the mound was first plowed quantities of charcoal and potsherds were found.

### CHICKASAWBA MOUND.

This mound is situated at Chickasawba Village, 24 miles north of Osceola. It is 25 feet high, and covers an area of one-fourth of an acre.

Collectors had already done much work on this mound, but obtained little or nothing. The owner does not wish it disturbed further. A field of several acres near by abounds in fragments of pottery, stone implements, and the remains of houses and camp-fires.

The field contained originally many small mounds or heaps, which were probably the sites of houses. In a number of cases skeletons have been found beneath these heaps.

### MOUNDS IN CARSON LAKE TOWNSHIP.

In Carson Lake township, 6 miles southwest of Osceola, on the farm of Hugh Walker, are three mounds, which were much disturbed by the earthquake that visited the New Madrid district in 1811.

The first one inspected is 59 feet wide by 75 feet long, but exhibits no evidence of having been a dwelling or burial place.

The second mound is about 100 yards from the first, and is circular in outline, having two ridge-like projections from opposite sides. It is 20 feet in height, and about 23 feet across at the top. A number of recent interments have been made near the summit.

The third mound is 250 yards from the preceding, and is 6 feet high, 34 feet wide, and 35 feet long. Six skeletons were found in this mound. A stratum of ashes, charcoal, and burned clay was associated with them. One cranium and a few bones were collected.

63049. Burnt clay from the third mound just described.

63052. Fragment of a plain vase; interior, reddish; exterior, yellowish-gray. Other fragments are of ordinary undecorated ware.

## MOUNDS AT PECAN POINT.

On the land of R. W. Friend, 1 mile west of the Mississippi River, are two mounds. The one first examined is 5 feet high and 150 feet in circumference. The other is 4 feet high and 75 feet in circumference. Two skeletons were found near the surface of the latter mound.

Near these mounds is another, 4 feet high and 20 feet in diameter. Formerly this mound was covered with large trees, and the roots have penetrated the soil, causing much injury to the contents. It is the opinion of the collector that this mound, as well as many others of the same region, has been used as a dwelling site, and that when a death occurred the dwelling was burned down over the body. Before building again the site was covered with a few inches of earth. There was no uniformity in the position of the graves or their contents. The following objects were obtained from this mound:

### ARTICLES OF CLAY.

63009. A jar-shaped vase, with low neck and much compressed body. Height, 4 inches; width, 5½ inches; surface, moderately smooth; color, almost black.

63022. A jar similar to the preceding, but somewhat taller.

63046. A rather unusual form of bottle-shaped vase. The neck is narrow and tapering. A fillet with finger indentations encircles the lip. The base of the neck is also ornamented with a collar or fillet. The body is globular, apparently a little pointed above. Whole height, 10½ inches; width, 8 inches; color, gray.

63029. A small, large-necked vase, with globular body, and lip a little recurved. The body is ornamented with a number of indentations, probably made with the finger nail. Color, dark gray.

63008. A large, thick-bodied vase, modeled to represent a hunchbacked human figure. The head is missing. It is 9 inches in width, and has been about 12 inches in height. Ware of the ordinary dark variety.

62995. Fragments of steatite vessels which have been from 1 to 2 feet in diameter. The walls about the rims were quite thin.

62959. A large clay pipe, found in the soil near the banks of the Mississippi.

## FIELD GRAVES AND FIELDS IN THE VICINITY OF PECAN POINT.

### ARTICLES OF STONE.

63204. A large lot of arrow-points of yellow and gray jasper.

62966, 62976, 62979–62998, 63000–63006. Celts or knives made of jasper and yellowish jaspery slate, which range from 2 to 5 inches in length, and are less than 1 inch in width and half an inch in thickness. They have been chipped into the desired shape, and finished by grinding off the more prominent parts and producing in many cases sharp cutting edges. A good example is shown in Fig. 142.

Fig. 142.

62965. A flat pebble, with rudely-made notches at the side.

62967, 62968, 62974. Fragments of celts.

62970. Yellowish jasper pebble, resembling a celt.

62000. Fragment of a long, chipped, knife-like implement, the extremities of which are lost.

62975. Fragment of a steatite vessel.

62969, 62971. Sandstone pebbles.

62960. Hammer-stone, with conical points, made from a pebble of cherty sandstone.

62962. Slightly grooved fragment of rubbing-stone.
62964. Flat pebble, slightly hollowed by use; a sort of shallow mortar.
62961. Fragment of a stone similar to the preceding.
62972. Fragment of concretionary iron ore, concave on one side.
62973. Red paint.

ARTICLES OF CLAY.

A large number of very fine vessls of clay was presented by Dr. J. M. Lindsley. They were obtained from a field near Pecan Point, within

Fig. 143.

half a mile of the Mississippi River. In the fields is a large mound which could not be opened on account of the crops. Years ago, when the timber was cleared from this field, many small elevations or hillocks were observed scattered irregularly over the surface. The plow has obliterated these, but has brought to light many evidences of ancient

occupation, such as charcoal, ashes, burned clay, stone implements, and human bones.

63207. A large, beautifully-formed jar has received this number. The neck is short and slender, and the rim slightly enlarged and recurved. The body is full and symmetrical, but greatly compressed vertically, the width being about twice the height. The ware is of the dark, porous variety. Full height, 8 inches; width, 10 inches.

63010. A bottle-shaped jar or vase, with long neck and globular body. The form is unusually graceful. Height is 10 inches. Diameter of body, 6½ inches. This vessel is shown in Fig. 143.

63012. A well-formed jar, with plain neck and globular body. Seven and one-half inches in height, and 8½ in width.

FIG. 144.

63013. A medium sized, bottle-shaped vessel, of elegant proportions. A rudimentary foot or stand is added to the bottom. Height, 8 inches. Fig. 144.

63017. A small, much compressed, bottle-shaped vase. Height, 5 inches; width, 6½ inches.

63018. A bottle-shaped vase of reddish-gray color, resembling the preceding in shape and size.

63019. A large, bottle-shaped vase, with long neck and subglobular body. It is unique in having a stand or base which seems to have been added after the body was somewhat hardened. This stand has been perforated for ornament, as shown in Fig. 145. Height, 8 inches; diameter, 6 inches.

63011. A small vase, ornamented with a series of ribs, which extend around the body from the neck to the base. This vessel is

FIG. 145.

shown in Fig. 146. It is in a fragmentary state. Height, 4¼ inches; width, 7 inches.

FIG. 146.

63016. A medium-sized vase with vertically compressed body. Height, 6 inches; diameter, 8½ inches. Fig. 147.

63015. A plain bowl, with flattish bottom. Diameter, 9 inches; height 5 inches.

FIG. 147.

63014. A well-made jar or vase, with globular body, 6 inches in width and 4½ in height. The surface of the vessel is completely covered with an irregular, bead-like ornamentation, made by pinching the soft clay between the thumb and fingers. Fig. 148. Diameter 5½ inches.

FIG. 148.

63020. A much compressed vase, 4½ inches in height and 7½ in width. Four equi-distant protuberances are placed about the widest part of the body and rudely imitate the extremities of some animal.

63021. A small, jar-like vase, with globular body, 6 inches in height, and the same in diameter. The form is not quite symmetrical.

63022. A small vase, with large, high neck and much compressed body. Height, 5½ inches; width, 6½ inches.

63023. A vase similar to the preceding.

63024. A medium-sized bowl, 7½ inches in diameter and 3 inches in height. The rim has an exterior ornament of thumb indentations.

63025. A small, rudely-constructed jar, 4 inches in height and 4½ in width.

FIG. 149.

63026. A jar having a high, wide neck, and small, globular body. The bottom is flat. Height, 5 inches; width, 4½ inches.

63027. A small, rudely-constructed cup, of a reddish color. Height, 1 inch; width, 1⅓ inches.

63045. A small, rudely-finished vase, with high, wide neck and short pedestal. The globular body is embellished with an encircling band of scroll-work of incised lines. The scrolls are bordered by triangular wings filled with reticulated lines, as shown in Fig. 149; height, 4¾ inches. Nos. 63113, 63026, and 63099 are plain vessels of similar form.

Additional numbers have been given to numerous fragments from this locality.

## COLLECTION FROM ARKANSAS COUNTY.

### MOUNDS AT ARKANSAS POST.

A group of well-known mounds is situated on the farm of the late Frank Menard, 8 miles south-east of the village of Arkansas Post.

The largest mound is 965 feet in circumference at the top and considerably larger at the base. The slopes are covered with trees and bushes.

This mound had already been dug into quite extensively, and it was thought useless to explore it further. Connected with this mound by a ridge of earth 300 feet long and 20 feet across, is a small circular mound, 15 feet high and 45 feet in diameter, which bore evidence of having been occupied by houses.

#### ARTICLES OF CLAY.

Near the middle of the connecting ridge, just under the soil, a layer of burnt clay, about 5 or 6 feet in diameter, was found. At one side, imbedded in the *débris* of clay, a large quantity of fragments of earthen vessels was discovered. They comprise a number of bowls of various sizes, which are all quite new-looking, and are of a type of ware quite distinct from that found in the fields and graves of the same locality. Restorations of a large number have been made, and the collection proves to be extremely interesting.

The collector argues, from the position of the fragmentary vessels, that they had been placed by their owners upon the roof of the house, which, he surmises, was destroyed by fire.

63040, 63034, 63170, 63421, 65412, 65409, 65422, 65405. Plain bowls of yellowish-gray ware, restored from fragments described above. They are wide and shallow, and somewhat conical below; hand-made, and without polish. Composed of clay, tempered with pulverized shell. The walls are usually quite thin. Diameter 10 to 13 inches. Height 3 to 6 inches.

FIG. 150.

63039, 63033, 63041–63043, 64045, 65406, 65401–65403, 65415,–65417, 65408, 65410. Bowls corresponding in general character to those described above, but having tasteful designs of incised lines and indentations on the exterior surface. The most interesting of these designs consists of series of interlaced or of festooned lines. The exterior margin is encircled, in all cases, by ornaments consisting of parallel lines, groups of short incised lines, or rows of indentations.

FIG. 151.

The principal design encircles the body beneath this, as shown in Figs. 150 and 151.

63037, 63038, 63416. Bowls similar to the above having interior decorations consisting of curved lines.

63035, 63099, 65404, 65411, 65413, 65414, 65418–65420, 65423. Bowls corresponding to the above in general characters, but having flaring rims. They are mostly plain. A few have decorative designs of incised lines. Some have been blackened by use as cooking vessels.

## FIELD GRAVES NEAR MENARD MOUND.

Surrounding the Menard mound is a field containing about twenty acres, which appears at one time to have been the site of a great number of dwellings, as, at a depth of from 1 to 2 feet, layers of burned clay are found. This field seems also to have been a great cemetery, as the remains of skeletons are found in great numbers.

Pottery is found in great abundance. It has, as a rule, been deposited near the heads of the dead, but no ornaments or implements have been discovered with the remains. The frequent plowing of the field has destroyed many earthen vessels, the interments having been made quite near the surface. It is a noticeable fact that the pottery from these graves is of a character quite distinct from that of the mound. It is of the class of ware so common in this region.

ARTICLES OF STONE.

63129, 63122, 63150. Arrow-points, spear-points, and knives of chalcedony, jasper, and quartz.

63132. Celt or chisel of black slate, 2½ inches long, and 1¼ wide at the wider end.

63133. Celt of gray diorite. The blade is quite smooth; the upper part is roughened. Length, 3 inches. Width, 1½ inches. Thickness, 1 inch.

63134. Celt of yellow limestone, 2½ inches long, and 1½ inches wide.

63135. A two-edged celt of gray quartzite, 2¼ inches long, and three-fourths of an inch wide.

FIG. 152.

63136. Celt of yellowish-gray jasper, chipped, and afterwards partially smoothed by grinding. Four and one-half inches long, and 1½ inches wide.

63137. Celt very similar to the preceding.

63138. Celt of dark-gray slate; edge nicely sharpened. Lower part smooth, upper part rough; 4½ inches long, 1¼ inches wide, and nearly 1 inch thick.

63123. Fragment of a large celt, with conical apex.

63124. A hammer-stone.

63131. A pebble of coarse sandstone, resembling a celt in shape.

63127. A quartz pebble, probably used as a polishing-stone.

63139. A boat-shaped implement of speckled volcanic rock, 3 inches long, 1 inch wide, and three-fourths of an inch thick at the middle part.

63140. An implement of grayish-red sandstone similar to the above in size and shape. The ends are slightly squared.

63126. A small disk of gray quartzite, having a shallow circular depression in each face.

63128. A pendant of gray slate, somewhat pear-shaped in outline, 1½ inches in diameter, and one-eighth of an inch thick. Near the pointed end, a neat, biconical perforation has been made.

63121. An implement or ceremonial stone of ferruginous slate, possibly a clay iron-stone, or limonite. It has a hatchet-like outline, the blade being semicircular, and the upper part elongated and narrow. A large biconical perforation has been made near the center of the implement; a smaller one, as if for suspension, at the upper end. It is 6¼ inches long, 5½ inches wide, and three-fourths of an inch thick. Fig. 152.

ARTICLES OF CLAY.

63113. A small reddish cup or vase. The rim is low and wide and is ornamented with four ears placed at regular intervals on the exterior surface. Two of these are pierced as if for the insertion of a string. Height, 3 inches. Width, 5 inches. Fig. 153.

FIG. 153.

63111. A small bottle-shaped vase. The surface has been painted red. Height, 4 incnes. Width, 3½ inches. Fig. 154.

FIG. 154.

63091. A small globular vase, with low neck of medium width, which has an ornament consisting of a band of clay, slightly raised and indented with oblique lines. Yellowish-gray ware with dark stains. Height, 6 inches.

63108. A low bottle-shaped vase, of yellowish ware, with flaring rim and somewhat flattened body. Height, 5 inches; width 5 inches. Fig. 155.

FIG. 155.

63098. A well-made bottle shaped vase, with low neck and globular body, somewhat conical above. Color dark brownish. 7½ inches in height. Shown in Fig. 156.

FIG. 156.

63090. Fragments of vases corresponding in characters to the preceding. One example has been painted red.

63110. A small bottle-shaped vase of red ware. Height 6 inches, width 5½ inches.

63102. The body of a small bottle-shaped vase, much flattened, the outline being quite angular at the most expanded part. Yellowish-gray in color and without polish. There are indications that a design in red has ornamented the body. Width 4 inches.

63092. The body of a small bottle-shaped vase, globular in form. Surface painted red and unusually well polished. Diameter 4½ inches.

63100. Neck and upper part of body of a vase resembling in form and color the example last described.

63120. A handsome bottle-shaped vase with flaring lip. The neck widens toward the base. The body is almost globular, being slightly pointed above, and expanded along the equatorial belt. The surface is only moderately smooth. The body is ornamented with a very handsome design of incised lines, which consists of a scroll pattern, divided into four sections by perpendicular lines. The design covers the upper part of the body, the lower part being plain. Height, 9½ inches. Fig. 157.

FIG. 157.

63112. A bottle-shaped vessel of dark, rudely finished ware. The body is modeled to represent a fish, the mouth and eyes appearing on one side, and the tail upon the other. Width 3¼ inches. Fig. 158.

63114, 63117. Two small vessels with globular bodies, which have a curious resemblance to an ordinary tea-pot. A spout has, in each case, been added to the side of the body. Figs. 159 and 160 show these vessels on a scale of one-half.

FIG. 158.

FIG. 159.

63115. An oblong, shallow basin. Wide, flat handles have been added to the rim at the ends of the vessel; one of these is pierced. Length 8¾ inches, width 4 inches, depth 2 inches. Color dark gray. Fig. 161.

FIG. 160.

FIG. 161.

63103, 63101, 63169, 63176, 63116, 63199, 63098. Plain bowls of ordinary composition and appearance. Fig. 162 is a good example. Diameter 9 inches.

FIG. 162.

63096. A handsome bowl of dark ware. The body is ornamented with an incised design, which consists of a somewhat disconnected running scroll. The bottom is flat. Diameter 8¼ inches. Fig. 163.

FIG. 163.

63109. A bowl of dark porous ware, very nicely made. The rim is ornamented at one side with a grotesque head, representing some wild animal, probably a panther. The ornament on the opposite side takes the place of the tail of the animal. Diameter of bowl 8 inches. Fig. 164.

63028, 63046. Fragments of many vessels, chiefly of black porous ware, among which are a number of handles representing the heads of birds and quadrupeds, also the fragments of a vessel which restored give the vase shown in Fig. 165. The designs are red on a yellowish ground. Diameter 5½ inches.

63107. A large vase modeled to represent a grotesque human figure. It is painted with designs in red and white, the ground color

FIG. 164.

being a reddish yellow. The figure has a kneeling posture. The hands are upraised against the shoulders, with palms

FIG. 165.

turned forward. Height, 10½ inches; width of shoulders, 8 inches. Fig. 166.

63090, 63054, 63095. Fragments of pottery having incised designs, similar to the dark ware already described. A few of these fragments have been worked into rude disks.

FIG. 166.

OBJECTS OF METAL.

62048. A thin plate of copper, probably intended for a pendent ornament, as two perforations have been made at one end. It is rectangular in outline, and has suffered much from corrosion.

63113. A fragment of galena ore.

ANIMAL SUBSTANCES.

63142. Fragment of a needle-like perforator. A conical perforation has been made toward the larger end. The point has been lost.

63047. A cubical fragment of bone, the sides of which have been squared by cutting or grinding.

## COLLECTION FROM MONROE COUNTY, ARKANSAS.

### MOUND AT LAWRENCEVILLE.

On the farm of Daniel Thompson, near Lawrenceville, the remains of ancient habitations are of frequent occurrence.

The fields have been cultivated for many years. In one case a bed of clay 8 inches thick, and covering an area of many hundred feet, was discovered near the surface; this is supposed to be the remains of the roof of a house. Associated with it were a number of objects, among which were five very interesting specimens of pottery.

#### ARTICLES OF CLAY.

63151. A large bottle-shaped vase of red and white ware. The upper part of the neck is lost. The body is encircled by an ornamental design in white, upon a red ground, which resembles a rudely drawn Greek fret. The diameter of the body is 9 inches; the height has been 11 or 12 inches.

FIG. 167.

63152. A fine bottle-shaped vase, resembling the preceding; very handsome, and in a remarkably good state of preservation. It also has a design in red and white. The original color of the

vase has been a dull reddish yellow. The neck is red, the body is ornamented with four red and four white figures, which extend from the neck to the base of the vessel. These belts of color are separated by bands of the ground-color of the vessel. Height 12 inches. Fig. 167.

63153. A small rude cup of gray clay, without decoration. Diameter 4 inches.

63154. An egg-shaped vessel, made in imitation of a gourd. The mouth of this vessel is a small round opening on the side, near the pointed end. The base is somewhat flattened. Height 5 inches. Fig. 168.

FIG. 168.

63155. A minute cup, 1½ inches in diameter. The rim is encircled by a series of rude notches.

## MOUNDS AT INDIAN BAY.

A large mound 30 feet high and 250 feet long is located on the farm of Mr. A. Spencer, near Indian Bay. Our collector, however, could not obtain permission to examine it. At the edge of Indian Bay corporation is another large mound, used as a cemetery by the white residents. In a field near by were two small mounds about 3 feet in height and 30 feet in circumference. In one of these, two feet beneath the surface, a skeleton was found, near the head of which three earthen vessels had been placed. From the other small mound a very interesting collection of pottery was procured, much of which was in a fragmentary condition.

From these fragments a number of vessels have been reconstructed. These are given in the following list:

ARTICLES OF CLAY.

63046. A bottle-shaped vase of dark, grayish-brown ware. The neck is quite high and slender, and the body globular—a little elongated above. The rim and collar are ornamented with incised notches. Height, 10 inches.

63171. A large symmetrically shaped vase or jug of a grayish yellow color. Restored from fragments. The body of the jug is globular, the neck slightly flaring, the rim being notched on the outer edge. The ware is coarse and rough. Height, 10½ inches.

63156, 63163, 63164, 63173, 63174. Fragments of vessels similar to that last described.

63191. A low wide-mouthed vase of dark gray compact ware. The neck is decorated by two series of lines, which cross and re-cross the neck in such a manner as to form diamond-shaped figures. They are deeply incised. The rim is notched, and has three small nodes on the outer margin. The body is covered with an ornament produced by pinching the clay while in a soft state. Height, 6½ inches; diameter, 9 inches.

FIG. 169.

63159. A very large wide-mouthed vase, the body of which is conical below. The rim and neck are ornamented in a manner very similar to the one last described. Height, 16 inches; diameter, 19 inches. Fig. 169.

63028, 63029, 63030, 63164, 63166, 63167. Fragments of vessels similar to the one last described.

63192, 63195, 63196. Three small vsesels restored from fragments; two of these resemble deep bowls with flaring rims. The lip is notched on the outer margin. The other has an upright, slightly constricted neck, ornamented with a band of rude indentations. Diameter, 6¾ inches. Fig. 170.

63161. A shallow bowl of yellowish gray ware, ornamented with irregular notches about the rim. Diameter, 9 inches.

63197, 63162, 63185. Bowls similar to the preceding.

63194, 63160, 63168. Large bowls with flaring rims.

63176. A very deep bowl. Fragmentary.

63189. A large, handled cup or ladle of yellowish clay. The bowl part is 6 inches in diameter. The extremity of the handle has been lost. Fig. 171.

FIG. 170.

63157, 63,158. Large portions of the bodies of two vessels of unusual shape.

FIG. 171.

## COLLECTION FROM OHIO.

### FROM MOUNDS AND FIELDS.

During the year 1881 small collections of stone implements and articles of pottery were forwarded to the Bureau by Dr. Wills De Haas. Most of these are, however, without record, excepting of the most general character.

The majority appear to have been obtained from Warren County, at or in the vicinity of Fort Ancient.

#### ARTICLES OF STONE.

65613. Spear points or knives of gray chalcedony. Three are very sharply pointed, and have probably been used as perforators. Average width 1 inch, average length 2½ inches.

65615. Lot of rudely chipped arrow or spear points of grayish chalcedony. Notches quite shallow.

65616. A lot of medium-sized, rather heavy arrow points of gray chalcedony.

65617. Lot of neatly shaped, deeply notched spear and arrow points, averaging about 1 inch in width, and ranging from 2 to 3 inches in length. Made of gray chalcedony.

65618. Lot of arrow points, spear points, and knives of various sizes and shapes. Material same as the preceding.

65619. Lot of rudely finished knives and spear points, mostly wide and heavy, some being almost circular in outline. Material same as the preceding.

65620. Lot of large knives and spear points of variously colored chalcedony.

65621. Knives and flakes of chalcedony.

65722. Large lot of long, triangular knives or spear points, made of gray and reddish mottled chalcedony. They average about 2½ inches in length, and 1½ in width.

65623. Large lot of flakes and fragments of gray and dark chalcedony or flint, left from the manufacture of implements.

65434–65451. Celts and fragments of celts of greatly varied size and shape, made of a grayish, speckled rock, resembling diorite.

65429–65430, 65431. Medium-sized, grooved axes of ordinary forms. One is made of diorite (?), the others of gray rock resembling sandstone.

65426–65428. Very large grooved axes of greenish diorite(?). The largest is 9½ inches long, 5 inches wide, and 3 inches thick.

65450. Short heavy pestles with broad bases and conical tops, made of gray diorite or sandstone. Diameter of bases from 2½ to 4 inches. Height from 3 to 6 inches.

65448. A long, heavy, cylindrical pestle.

65464–65492. Round, oblong, and flattish pebbles, comprising several varieties of stone, used as hammer-stones, nut-crackers, &c., varying from 1 to 6 inches in diameter. The sides of many are flattened or hollowed out by use.

65463. Fragment of cup stone, made of coarse sandstone. On one side two cavities remain; on the other, three. These are about 1½ inches in diameter, and about one-half an inch in depth.

65449. A grooved stone implement, made from a large pebble of coarse gray stone. The groove about the middle has evidently been made for attaching a handle. The upper lobe has been considerably reduced by picking, and the base, which would correspond to the edge of an ax, has been worked quite flat. Length of lower part 4½ inches. Height of implement 3 inches.

ARTICLES OF CLAY.

65484. A number of small fragments of pottery of ordinary varieties.

## COLLECTION FROM OREGON.

### ARTICLES OF STONE.

The following articles were forwarded to the Bureau from John Day River, Oregon, by Captain Bendire:

64102–64113. Arrow-points, knives, and flakes of obsidian, agate, etc., from Indian graves on John Day River.

64125–64139. Fragments of stone implements, including celts, cylindrical pestles, etc., mostly of compact, eruptive rock.

64127. Pipe of gray sandstone, shaped very much like an ordinary straight cigar-holder; 3 inches long, and 1 inch in diameter at the larger end. Obtained from an Indian grave on John Day River.

64126. Fragment of a pipe-stem (?) made of soft black stone, apparently a chloritic slate. A very neat, ornamental design has been engraved upon the cylindrical stem.

64129. Fragment of an ornament carved from greenish sandstone.

## COLLECTIONS FROM KENTUCKY.

A small collection of ancient relics, obtained from caves in the vicinity of Mammoth Cave, Kentucky, was presented to the Bureau by Mr. Francis Klett.

With this collection were a number of articles of stone, some of which were probably obtained from the fields of the same region.

87276. Fragments of gourds.

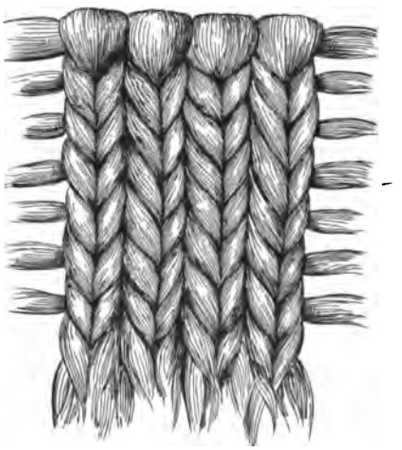

FIG. 172.

87277. Two very beautifully knit or plaited sandals. The fiber used has probably been obtained from the inner bark of trees. The combination of threads is shown in Fig. 172. A small piece of matting from the same place is shown in Fig. 173.

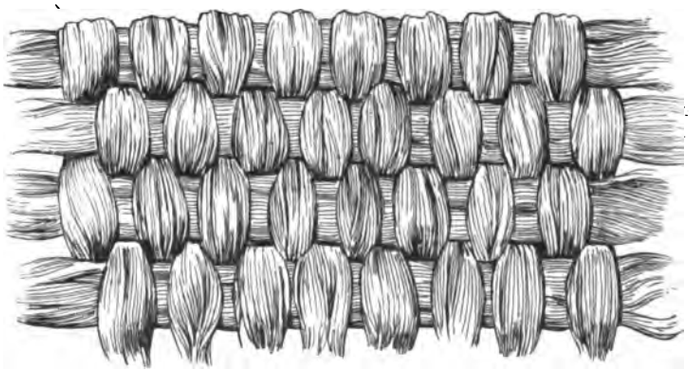

FIG. 173.

27278. Two bundles of charred sticks and reeds.
27280–27283. Spearheads of chert or flint.
27284. Stone knife.
27285. Flake knife.
27286. Small spear heads.
27287. Flint knife.
27288. Arrow heads.
27289. Same; small and thin.
27290–27293. Stone awls or perforators.
27294. Leaden bullet.
27295. Pieces of pottery.

## COLLECTIONS FROM MISSOURI.

### ARTICLES OF CLAY.

A fine collection of earthen vessels was purchased for the Bureau from Mr. J. T. Conden, of Morrow, Ohio, through the agency of Dr. Wills De Haas.

Few facts in regard to them have been furnished, excepting that they were taken from graves in the vicinity of Charleston, Mo. They resemble so closely the well-known types of Missouri pottery that it is safe to conclude that they were obtained from ancient graves and mounds in the locality named.

The numerous cuts accompanying this section are intended for subsequent use in a general treatise on the works of the Moundbuilders.

FIG. 174.

This ware is generally of the dark gray or black variety, hand-smoothed, or but slightly polished, and tempered with pulverized shells.

A few examples are yellowish-red in color. Some of these have been

painted red or have been ornamented with designs in red. In one case white paint has been used.

The prevailing form is a bottle-shaped vessel, the neck being frequently high and slender, and the body globular or subglobular. The base is nearly always slightly flattened.

65556. An effigy vase of unusual form. The body is subrectangular. The upper part or neck is lost, but has doubtless been modeled to represent the human figure, as the feet remain attached to the shoulder of the vessel. The color is yellowish gray. Diameter, 5 inches. Fig. 174.

FIG. 175.

65603. An effigy vase of the dark ware. The body is globular. A kneeling human figure forms the neck. The mouth of the vessel occurs at the back of the head—a rule in this class of vessels. Is is finely made and symmetrical. 9¾ inches high and 7 inches in diameter. Fig. 175.

65595. Effigy vase representing a kneeling or squatting human figure, moderately well modeled. The exterior surface is painted red. Height, 7 inches; diameter, 5 inches. The locality is not known with certainty.

65604–65607, 65611, 65612. Effigy vases of human figures. Sizes, medium to small. The body below the waist is hemispherical, and the legs are not indicated. Fig. 176.

FIG. 176.

65597. Effigy vase, representing an owl. The body is globular. The wings are indicated at the sides, and the legs and tail serve as a tripod when the vessel is placed in an upright position. The head is quite grotesque. This is a usual form in the Middle Mississippi district. Height, 8 inches; width, 5½ inches.

65608. Small example, resembling the preceding.

65601, 65596. Vases with globular bodies; the necks represent an owl's head. Size, medium.

65605. A small vase similar to the above, but having a human head.

65558. A minute vessel modeled to represent a bird, the opening or

FIG. 177.

mouth being on the under side of the body; length, 2 inches. Fig. 177.

65599, 65602, 65604, 65610. Bottle-shaped vases, with globular or flattish bodies and grotesque tops. The rounded heads are armed with a number of nodes or horns, but no features are shown. The largest is 7 inches in width by 7 in height. Fig. 178.

FIG. 178.

65598. Similar vase of medium size. The top is modeled to represent the curved stem and neck of a gourd. Fig. 179. Height 7 inches.

FIG. 179.

65600. Vase similar to the above. The top representing a gourd with short conical neck. Four lines are drawn from the stem down the sides which represent the natural markings of the gourd. Height, 5½ inches; diameter, 5½ inches.

FIG. 180.

65555. A two-storied vessel, the lower part being a cup of flattened globular form. The upper part is similar in size and shape, but is modeled to represent a univalve shell, the apex being represented by a large node surrounded by six smaller nodes, and the base or spine by a graceful extension of the rim. The groove or depression that encircles the vessel between the upper and lower parts of the body is spanned by two minute handles. Height, 5 inches; width, 4½. Fig. 180.

FIG. 181.

65543, 65551, 65552, 65554, 65573. Small bowls or cups, made in imitation of shell vessels, the noded apex occurring at one side, and the more or less pointed beak at the opposite side Fig. 181. Another similar specimen with hemispherical body is given in Fig. 182. Length, 6 inches.

FIG. 182.

65542, 65545, 65550. Small vases with wide mouths, the rim and shoulders of which have the heads and extremities of frogs, modeled in relief. Fig. 183. Diameter, 6 inches.

FIG. 183.

65539, 65541, 65544, 65546. Low, wide-mouthed vases or bowls, modeled about the rim to represent sunfish. A vertical view is given in Fig. 184. 5 inches in length.

65579. A small bowl, the rim of which is embellished on one side with the head of a panther, on the other side a flattish projection which resembles a tail.

65580. A small bowl, having upon the rim a human head, the face of which is turned inward. On the opposite side is the usual flattish projection. Fig. 185. Diameter of bowl 5 inches.

FIG. 184.

65578. Small bowl, the rim of which is embellished with the head of a fox or wolf; at the opposite side is the usual tail.

FIG. 185.

65576, 65577, 65581, 65585. Bowls of various sizes, the rims of which are ornamented with the heads and tails of birds. No. 65576 is an unusually fine example. Besides the features described it has been further embellished by four incised lines which encircle the rim, forming a loop on the opposite sides as seen in Fig. 186. Bowl 9 inches in diameter.

65553. Small bowl, the rim of which has been embellished by four pairs of nodes. Fig. 187. Diameter, 6 inches.

65547. A small globular cup of dark ware which has four large nodes about the rim. Between these on the sides of the vessel, four ornamental figures have been painted in red, these consist of an inner circle occupied by a cross, and an exterior circle of rays or scallops. Height, 2½ inches; width, 3½ inches.

The rim has been perforated for the purpose of suspension. Fig. 188.

FIG. 186.

FIG. 187.

FIG. 188.

65487, 65512, 65514, 65519, 65521, 65523, 65525, 65531. Bottle-shaped vases. The bodies are generally globular. A few are conical above, while others are much compressed vertically. Some are slightly ridged about the greatest circumference, while all are slightly flattened on the bottom. The necks are slender and long, being about equal to the body in height. They are generally narrowest in the middle, expanding trumpet-like toward the mouth, and widening more or less abruptly toward the shoulder below. In a few cases a ridge or collar encircles the base of the neck. The exterior surface is generally quite smooth, but never polished, although a polishing implement seems to have been used.

The largest is 9 inches in height and 7 inches in diameter. No. 65501 has a very tasteful incised design, encircling the shoulder as shown in Fig. 189. Diameter 6½ inches.

FIG. 189.

65520. Vase similar to the above in form, but with the addition of a base or stand, 1 inch high and 3 inches in diameter at the base.

65486. Same, with the base divided into three parts, forming a kind of tripod, the legs being flat. Fig. 190. Height, 9 inches.

65513, 65526, 65530, 65532, 65539. Bottle or jug shaped vases, resembling the preceding, but having wide, short necks. Fig. 191 illustrates a typical form. Height, 4¼ inches.

65485. A vase similar to the above, but of yellowish gray ware, decorated with a design in broad red and white lines. Height, 6 inches; width, 6 inches. Height of neck, 2 inches; width, 3 inches.

65538. Similar to the above in shape, but with flattish body, and peculiar in having two small handles or ears at the base of the neck. Fig. 192. Diameter, 5 inches.

**65548, 65561, 65562, 65564, 65569. Small cups, with low, wide necks, and globular or subglobular bodies, having two handles or ears which connect the lip with the shoulder.**

FIG. 190.

FIG. 191.

65572. A cup like the above, with four handles.

65563, 65565, 65568. Small cups similar to the preceding, but having a variety of indented ornaments about the shoulder and upper part of the body; these ornaments consist of wide vertical lines, or of encircling scalloped lines. Figs. 193 and 194. Diameter of each, 4½ inches.

FIG. 192.

FIG. 193.

FIG. 194.

65570. Has six nodes about the circumference, and a scalloped figure of three incised lines encircling the vessel above them. The handles have oblique incised lines upon the outer surface.

65588, 65590. Bowls with scalloped rims. The largest is 9 inches in diameter and 3 inches in height. Fig. 195.

FIG. 195.

65574, 65575, 65586, 65587, 65591, 65593. Plain bowls, of various sizes, and somewhat varied shapes. Figs. 196 and 197. Drawn one-half the real size.

FIG. 196.

FIG. 197.

65447. Stone implement of unusual form. It may be described as a flattish cylinder tapering slightly toward the ends, which are truncated. In one end a hole has been bored one-half an inch in diameter and three-fourths of an inch deep. A narrow, shallow groove encircles the implement near the middle. The material is a grayish slate. The form is symmetrical and the surface quite smooth.

Found upon the surface in Hamilton County, Indiana.

65353. A copper knife or poinard, with bent point. Found by Edward Daniels while digging a cellar at Ripon, Wis.

65352. A handsome vase, shaped like a bowl with incurved rim, obtained from a mound on the farm of A. C. Zachary, in Morgan County, Georgia. The incurved surface above has an ornamental design of incised lines resembling the Greek fret. The most expanded portion of the vessel is encircled by a raised band, which is neatly ornamented with notches. The lower part of the body is shaped like a bowl with a flattened base. Diameter 9½ inches. Presented by J. C. C. Blackburn.

## COLLECTION FROM PERU, SOUTH AMERICA.

A number of interesting articles were presented by Mr. G. H. Hurlbut. These were obtained from ancient graves in the vicinity of Lima by an agent sent out for the purpose by Mr. Hurlbut while the city was invested by the Chilian army. Details of their occurrence were consequently not obtained.

A study of this collection leads to the belief that all the specimens are from one interment, that is, the grave of a single individual. The fact that there is but one skull, one mask-like idol, and but a small number of articles of each of the classes represented, tends to confirm this supposition.

65377. Skull retaining the scalp and hair. The latter is long, coarse, and black. The lower jaw is missing.

65376. A mask-like wooden figure, the face being somewhat above life-size. Fig. 198. It is of a form not unusual in Peruvian graves. The features are fairly well shown. The eyes are formed by excavating oval depressions and setting in pieces of shell. First, oval pieces of white clam-shell are inserted, which represent the whites of the eye; upon these small circular bits of dark shell are cemented, representing the pupils. Locks of hair have been set in beneath the shell, the ends of which project, forming the lashes of the eye.

The back head is formed by a neatly-rounded bundle of leaves, held in place by a net-work of coarse cord. The edges of the wooden mask are perforated in several places; by means of these the back head, some long locks of fine flax which serve as hair, and a number of other articles have been attached.

Upon the crown a large bunch of brilliantly colored feathers has been fixed; behind this, extending across the top of the head, is a long pouch of coarse white cloth in which a great number of articles have been placed—little packages of beans and seeds, rolls of cloth of different colors and textures, minute bundles of wool and flax and cords, bits of copper and earth carefully wrapped in husks, bundles of feathers, etc.

Encircling the crown are long, narrow bands or sashes, one of which is white, the others having figures woven in brilliant colors. The ends of these hang down at the sides of the face. Attached to one side of the mask by long stout cords is a pouch of coarse cotton cloth resembling a tobacco-bag. It is about 6 inches square. Attached to the lower edge of this is a fringe of long, heavy cords. To the opposite side a

net is suspended, in which had been placed innumerable articles, probably intended for the use of the dead—a sling, made of cords, very skillfully plaited; bundles of cord and

FIG. 198.

flax; small nets containing beans, seeds, and other articles; copper fish-hooks, still attached to the lines, which are wound about bits of cornstalk or cane; neatly-made sinkers wrapped in corn-husks, together with a variety of other articles.

65380, 65382. Sinkers of gray slate, shaped somewhat like a cigar, one or more groves partially encircling the ends. These were carefully wrapped in corn-husks. Fig. 199.

65383, 65384. Two copper fish-hooks and the cords to which they are attached. The hooks pierce the ends of the bit of cornstalk about which the cord is wound. Fig. 200.

½

FIG. 199.

½

FIG. 200.

65387. A sling, 4 feet long. The extremities consist of a single cord, the middle part of 4 heavy, compactly-plaited cords.

65389. Head-bands of coarse fabrication, having figures of red, yellow and white.

65391. A large piece of cloth, possibly a mantle, made by piecing together fragments of highly-colored cloths.

65390. A large piece of gauze-like white cotton fabric.

65385, 65386. Small nets containing a variety of articles.

65386. A head ornament of red feathers, skillfully attached to cords.

SMITHSONIAN INSTITUTION——BUREAU OF ETHNOLOGY.

# ILLUSTRATED CATALOGUE

OF THE

# COLLECTIONS OBTAINED FROM THE PUEBLOS

OF

ZUÑI, NEW MEXICO, AND WOLPI, ARIZONA, IN 1881.

BY

JAMES STEVENSON.

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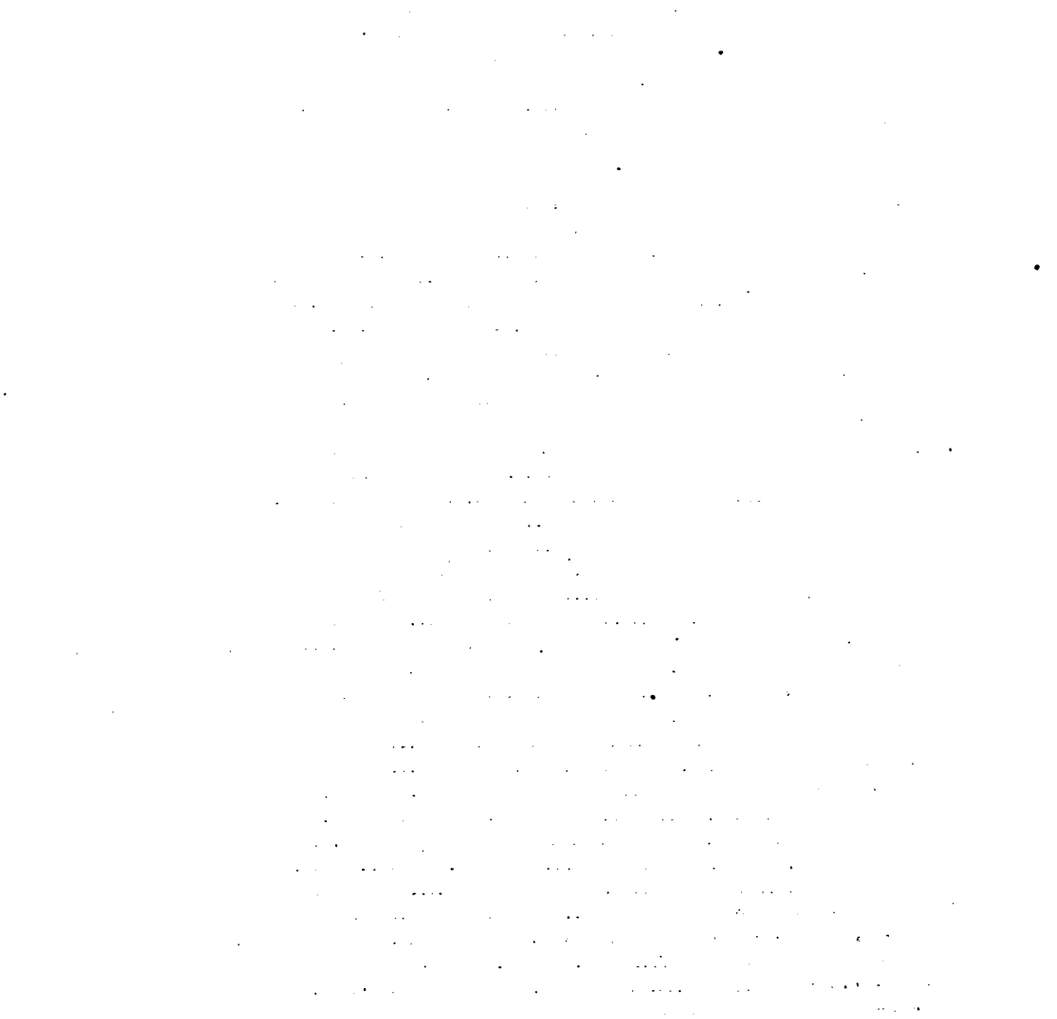

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## LETTER OF TRANSMITTAL.

*Washington, D. C., August* 28, 1882.

SIR: I have the honor to present herewith an illustrated catalogue of archæologic and ethnologic collections, made under your direction in Arizona and New Mexico, during the field season of 1881.

In connection with these collections, I am indebted to Mr. Frank H. Cushing for the preparation of the field catalogue for the collection from Zuñi. His thorough knowledge of the Zuñi language enabled him to obtain the Indian name of most of the articles procured, which names are given in this catalogue. I have also to thank him for valuable assistance in making the collection. I also take pleasure in expressing thanks to Mr. Victor Mindeleff for his aid in making the collection, in which labor he rendered faithful assistance.

Col. L. P. Bradley, commandant of Fort Wingate, extended us many courtesies and material aid, for which I am pleased to extend thanks.

Hoping the collections of the season form a contribution equally valuable with those previously procured from the southwest,

I am, very respectfully, your obedient servant,

JAMES STEVENSON.

Prof. J. W. POWELL,
*Director Bureau of Ethnology.*

# ILLUSTRATED CATALOGUE OF THE COLLECTIONS OF 1881.

By James Stevenson.

## INTRODUCTORY.

The following catalogue contains a descriptive enumeration of the archæologic and ethnologic specimens collected in Arizona and New Mexico during the season of 1881. These collections were all obtained from the pueblo of Zuñi in Northwestern New Mexico, and the pueblos comprising the province of Tusayan, in Northeastern Arizona. The entire collection contains about four thousand nine hundred specimens.

The articles of stone consist of axes, in various conditions of preservation. Some are quite perfect, while many are more or less impaired by modern uses, for which they were not originally intended. In nearly all instances they are grooved, and a few are provided with double splitting or cutting edges; but as a rule these axes were made with one end blunt for pounding or hammering, while the opposite end is provided with an edge. The large pestles and mortars were designed for crushing grain and food, the small ones for grinding and mixing mineral pigments for ceramic or decorative purposes.

Among the articles of stone are about one hundred and fifty hunting and war amulets. These objects present the most interesting features of the collection, and were among the most difficult articles to obtain. The Indians prize them very highly as keepsakes, which they employ in war, the chase, and sacred ceremonies. Each specimen is specifically referred to in the catalogue, accompanied with some wood-cut illustrations of such specimens as possess the greatest significance.

Mr. Frank H. Cushing has presented a full account of the history, traditions, and uses of these images or gods, in a paper entitled "Zuñi Fetiches," in the Second Annual Report of the Bureau for 1882, to which the reader is referred.

In these collections, as in those of the two previous seasons, articles of clay predominate. They consist of Tinajas, or large, decorated, vase-shaped water-vessels. These vary in capacity from one to six gallons, and are the principal vessels used for holding and storing water for domestic purposes. These vases do not vary greatly in form, yet the colored designs with which they are ornamented present as many variations as there are specimens. The causes for these variations, both in size and ceramic characters, as well as the method of manufacturing them, are quite fully explained in the notes accompanying my catalogue of collections from these same localities in the Annual Report of the Bureau of Ethnology for 1880–'81.

The collection also contains a large number of jug-shaped canteens, varying in capacity from one pint to three gallons. These vessels, like an ordinary jug, are provided with a small nozzle, and are used to carry water and to drink from. They vary in their decorative designs, but are seldom as elaborate or beautiful as the vases.

In the collection are also clay spoons, ladles, and dippers of two or three kinds of ware, such as red, white, and black, of various sizes. Many of these are fancifully decorated. Also pitchers, mugs, and cups of different patterns, forms, and sizes, variously ornamented in red, black, and white. A very fine collection of meal or sacred pottery baskets was obtained. These are also of varied forms or types, some with handles, terraced and fluted edges or rims, usually decorated with figures of the tadpole and horned frog, and occasionally with the representation of the road runner, and frequently with the sacred butterfly.

The condiment vessels form no small part of the collection. The forms and styles of these vessels can only be appreciated by reference to the specific descriptions and illustrations in the catalogue.

A large number of cooking bowls and pots were obtained, but these are of less interest, as they are in all cases plain black vessels without ornamentation of any kind. They generally resemble the old-fashioned cast-iron cooking pot used by Europeans. Occasionally one is found which is provided with legs, in imitation probably of the skillet or pots used by the Mexicans of that country.

The vegetal substances comprise utensils and implements of all kinds. Among these are baskets, trays, water-jugs, corn-planters, bows, arrows, sieves, gaming-blocks, &c. The basketry is worthy of inspection for the ingenuity and skill displayed in the manufacture of such articles. These consist of fine meal baskets or trays of all sizes, many of which are curiously ornamented in bright colors. The coarser baskets, which are constructed and shaped to suit the service for which they are employed, are used as sieves and for conveying corn and fruit from the farms. In addition to the objects above referred to, hundreds that are not mentioned will be found described or illustrated in their proper places in the catalogue.

Most of the plates presented in this Catalogue are designed to show the manner in which the Zuñi and Moki Indians use certain implements in some of their arts and industries, such as the polishing stone; rotary, stone-pointed drill; the manner of combing and dressing the hair; the spindle whorl, showing the mode of preparing the woof for weaving.

## COLLECTIONS FROM ZUÑI, NEW MEXICO.

### ARTICLES OF STONE.

#### AXES.

65890. Stone axe, small, double-grooved. O-la k'i-le, kwïl á-kwi-ai-e.

65891, 65892, 65893, 65894, 65895, 65896, 65897, 65898. Ditto, single-grooved.

65868, 65855. Ditto, large.

65854. Ditto, large and broad.

65876. Ditto, very broad.

65869. Ditto, very large, and showing use as pecking-stone.

65856, 65870, 65877, 65857, 65871, 65858, 65878, 65879. Ditto, large.

65872. Ditto, very thin-bladed.

65859. Ditto, flat.

65860, 65880. Ditto, showing use as maul.

65861. Ditto, double-grooved. Kwil á-kwi-ai-e.

65862. Ditto, double-grooved, handsomely finished.

66045. Ditto, double-grooved, handsomely finished. K'i k'iäthl-thlâ-nai-e.

66882, 65874. Very large ungrooved ancient stone axes or celts. O-la k'i-thlana, kwa-ak'-wam-me.

65853, 65851. Axe, grooved and highly finished. O la k'i k'iäth-thlâ-na yá-nï-shi.

65852. Ditto, very large.

65883, 65884, 65885, 65886, 65911, 65912, 65899, 65863, 65864, 65900, 65887, 65901, 65902, 65903, 65875, 65865, 65904, 65905, 65906, 65907 65908, 65866, 65909, 65910, 65889. Ditto, very crude. No. 65886 is distinguished by raised square at butt to facilitate hafting. Ní-pu-li-e.

65867. Ditto, made in imitation, for barter.

66306. Ditto, unfinished. O-la k'íl á-a-le.

65913. Ditto, small.

65922, 65923, 65921, 65914, 65919, 65917, 65924, 65925, 65920, 65915, 65916. Stone axes with handles, some made in imitation, others preserved as heir-looms from ancient times. O-la k'i-thlä-shi-we.

65918. Small, grooved, stone axe. O-la k'i tsa-na.

#### METATES.

66324. Metate for reducing coarse corn-meal to flour. Ó-tsa-k'ia-na-kia-á-k'e.

66320, 66313. Ditto, for grinding paint for decorating pottery. Té tsi-na-k'ia he-lin ón-a-k'ia.

66316, 66318, 66319, 26317. Ditto, for reducing cracked corn to meal. Tchú ok-na-ki'a á-k'i.

66325. Ditto, a coarse, unfinished metate. A-k'e, kwa-yá nam-o-na.

66312. Ditto, ancient, very rude. Í-no-to-na á-k'e.

66311. Modern paint metate. He-lin ó-na-kia.

66322, 66315, 66321, 66314. Modern metates for reducing corn and other cereals. Ok-na-k'ia á-k'e-we.

MORTARS.

1935. Mortar made of a concretion. Mu-to-pa al' a-k'e.

1964. Ditto, made from muller.

1966. Ditto, small. Tú-lin-ne.

2119. Ditto, of fine-grained stone, used as a paint-mill for preparing sacred decoration colors. Tethl-na hé-lin o-na-kia á-shok-ton-ne.

2141, 2142, 2144. Ditto, very small. Á-tsa-na.

1961. Ditto, round. K'iä-mo-li-na.

66196, 66233. Rude paint mortars. He-lin on-a kia á-shok-to á-tsana.

66203. Ditto, chipped. Sho-k'wïs-na-k'ia.

66166, 66180. Ditto, pecked. Tok'-nai-e.

66175. Ditto, ground.

66197. Ditto, large, worn and ground. Tén-nai-e.

66226. Ditto, square and handsomely polished. Nó-k'iäthl-o-na.

66204. Ditto, split. Shó-k'wish-nai-e.

66178. Ditto, pecked, small.

66158, 66245, 66172. Ditto, pecked, slag. Á-k'win.

66154. Ditto, small, pecked.

66198. Ditto, with round depression, ground. Pi-tsu-lia wá shokt-ai-e.

66168. Ditto, square, pecked.

66228. Ditto, with groove around the edge. I'-tu-thlan-ah-nai-e.

66205, 66227, 66131, 66132. Ditto, small, pecked, and ground.

66111, 66206. Ditto, cup-shaped. A'-shok-ton-ak'-tsa-na.

66207. Ditto, with elongated cavity. A-k'i täs'h-sha-na.

66135. Ditto, pecked and ground.

66251. Ditto or trough of the malpais for grinding chili and preparing a sauce called K'iäthl-k'o-se=K'ol hé-akia á-shok-ton-ne.

66234. Ditto, crude.

66159. Ditto, small.

66246. Ditto, large and thick.

66244. Ditto, well pecked.

66236, 66190. Ditto, much worn.

66235. Ditto. Rectangular.

66157. Ditto, very small.

66177, 66250. Ditto, of finished sandstone.

66186. Ditto, very deep.

66252. Ditto, very large.

66208. Grinding-stone for colors used in decoration of vessels, in form of mortar. Te' tsi-na-k'ia á-shok-ton-ne.

66254. Ditto, with double concavity for red and black colors. Thluptsi-na k'win í-pä-tchi-e.
66160, 66163. Ditto or paint-mill for preparing colors for decoration of the sacred dances. Kâ-kà-awa he-lin o-na-kia á-shok-ton-ne.
66179. Ditto, long, pecked.
66184, 66165, 66187, 66188. Ditto, finished by pecking.
66219, 66229. Ditto, square.
66191, 66192. Ditto, pecked and chipped.
66176. Ditto, beautifully finished, long.
66171. Ditto, rectangular, beautifully finished, and long.
66209. Ditto, polished irregularly, rectangular.
66170. Ditto, handsomely finished by pecking and grinding.
66121. Ditto, crude, small.
66213, 66153. Ditto, made of a concretion. Mu-to-pa ál a-k'i.
66115, 66220, 66127. Ditto, slag.
66128, 66202, 66182. Ditto, round.
66181. Ditto, round and thick. K'iä'-mo-lia.
66193. Ditto, round.
66194. Ditto, rude.
66130, 66162, 66122, 66222. Ditto, hammer-stone form.
66114. Ditto, polished.
65939, 66230, 66125. Ditto, rectangular.
66210, 66231, 66195, 66212. Ditto, finished by grinding.
66121, 66152. Ditto, finished.
66189, 66211, 66185. Ditto, round. K'iä'-mo-lia.
66232. Ditto, with small muller. Tu-lin í-hi-kia.
66248, 66214. Paint mortars for reducing the paint for masks and pottery. He-lin ó-na-k'ia á-shok-to-we.
66237, 66215, 66240, 66241, 66238, 66243, 66242. Mortar, of slag, used in making the sauce described above, and reducing chili. K'iäthl-k'o-se k'iä-na-kia á-shok-ton-ne.
66201. Ditto, for children. Á-tsan á-wa.
66223. Ditto, for reducing paint used in decorating pottery. Na'-he-lin o-na-kia a'-shok-ton-ne.
66216. Ditto, square.
66183. Ditto, very deep and finished by pecking.
66249, 66253. Ditto, shallow.
66255. Ditto, unfinished.
66161. Ditto, very rude and small.
66224. Ditto, larger.
66225. Ditto, with small round concavity; hammer-stone form.
66137, 66155, 56139, 66140, 66141, 66174, 66164, 66167, 66144, 66120, 66123, 66147, 66138, 66173, 66145, 66117, 66151, 66143, 66136, 66149. Paint-mills of fine-grained stone for preparing sacred decoration colors. Ţethl-na he-lin o-na-kia á-shok to-we.

66113, 66129, 66112, 66148, 66118, 66142, 66146, 66119. Ditto, very small. Á-tsa-na.

66116. Ditto, for common uses. Kwam-as-tin-ák'ia-ni.

66247. Ditto or unfinished mortar of the malpais for grinding chili and other ingredients for sauce. K'ol ók-na-k'ia á shok-ton-ne.

66134, 66231, 66124, 66133. Ditto, finished by pecking.

MULLERS.

65946. Muller made from a small piece of hematite, used as source at once and muller of pottery paint. Té tsi-na-kia á-k'win á-a-le.

66007. Ditto, slag, originally a maul.

66036. Ditto, of true form, originally a maul. Tchĭsh-na-k'ia á-pi-tsu-li-a.

66015. Ditto, originally a maul.

66037. Ditto, of true form.

66200. Ditto, for grinding sauce of onion, chili, coriander, salt, and water. K'ol hé-ak'ia á-mu-luk-ton-ne.

66043. Ditto, handsomely finished in the form of a pestle.

66009. Ditto, regular form.

66156. Ditto, hammer-stone form.

66042. Ditto, crusher form.

65984. Ditto, for polishing, &c. Á k'iä-thlâ-k'iä-na-k'ia á-a-le.

66091, 66029, 66030, 66038, 66031, 66039, 65987, 65986, 65976, 65977, 65978, 65979, 65980. Ditto, used for preparing sauce.

66071, 66085, 66014, 66103, 66025, 66086, 66006, 66012, 66001, 66011, 66019, 66023, 66041, 66025, 66008, 66016, 66017, 66021, 67005, 66070, 66004. Ditto, mauls and mullers of slag for grinding chili and other ingredients of the sauce known as kiä'thl-k'o-se. Hé-a-kia á-mu-lok-to-we.

66088. Ditto, granite.

66024. Ditto, of granite, for preparing ingredients to form paste for pottery. Sa-to ók-na-k'ia-na-kia á k'iä-mo-li-an-ne.

66102, 66094, 66101, 66071, 66089, 66013, 66096, 66107, 66090, 66087, 66091, 66106, 66003, 66092, 66095, 65873. Mullers, grooved maul form. Ok'-na-k'ia o-la k'í kiä-mo li-a-we.

65881. Ditto, round.

66054. Ditto, for reducing paint used in pottery decoration, and for polishing. K'iä'thlâ-na-k'ia á-a-le.

66027. Ditto, in the form of a paint mortar. He-lin on-ak'ia á-tsa-na, kwïl-li-mük-te hé-k'o-pa.

66150. Ditto, with rounded bottom, enlarged middle and small concavity on apex. He-k'o yä'thl-tâi-e.

66109, 65952. Ditto, regular form.

65953, 65954, 65955, 65981, 65956, 65957, 65958, 65991, 65959, 65960, 65961, 65962, 65963. Small paint stones or mullers. He-lin o-na-kia á-k'iä-mo-li-a-we.

66032, 66033, 66035, 66034, 65994, 66026, 65995, 66049, 65996. Mullers for polishing or smoothing cooking stones, &c. Á k'iä-thlâ-k'ia-na-k'ia-á-we (plu.)

66256, 66257, 66276, 66285, 66266, 62258, 66273, 66263, 66264, 66274, 66286, 66271, 66272, 66259, 66261, 66270, 66267, 66293, 66288, 66287, 66290, 66289, 66291. Ditto, or rubbing-stones, used in connection with fine metals for grinding corn and meal. Tchú ok-na-k'ia yäl-li-we.

62298. Ditto, very large.

66275. Ditto, broken.

66269, 66294, 64299, 66300. Ditto, very broad and flat. Tchú ok-na-k'ia. Yal-li k'iá-pa-we.

66297, 66295, 66301, 66303, 66304, 66302, 67305. Ditto, ancient. I-no-to-na-awa yä'l-li-we.

66284. Ditto, modern, for making coarse meal.

66307. Ditto, large, for grinding chili. K'iä'thl-he-a-kia á-thla-na.

66296. Ditto, very broad, flat, and ancient, for grinding flour. I-no-te-kwe awen yä'l-lin-ne.

1982. Muller for reducing pottery colors.

1986. Ditto, maul form.

2154, 2163. Mauls and mullers of slag for grinding chili and other ingredients of the sauce known as kiäthl k'o se = Kiä'thl-he-a-kia á-mu-luk-ton-ne.

2159, 2168, 2171, 2173. Small paint stones or mullers. He-lin o-na-k'ia a-k'iä-mo-li-a-we.

2167. Muller, very large.

2267. Ditto, or rubbing-stone, used in connection with fine metates for for grinding corn meal. Tchú ok-na-kia yäl-lin-ne.

2275. Ditto, unfinished. Kwa-yá-nam-o-na.

2338. Small chili muller.

2356. Polishing muller.

1998. Muller, used for preparing sauce.

### MISCELLANEOUS OBJECTS.

65940, 65941. Small stones used in polishing pottery. Té k'iâ thlâ-k'ia-na-kia á-we.

65998, 65942. Polishing stones used for grinding sacred paint.

65988, 65998, 65943, 65974, 63944, 66010. Ditto, large.

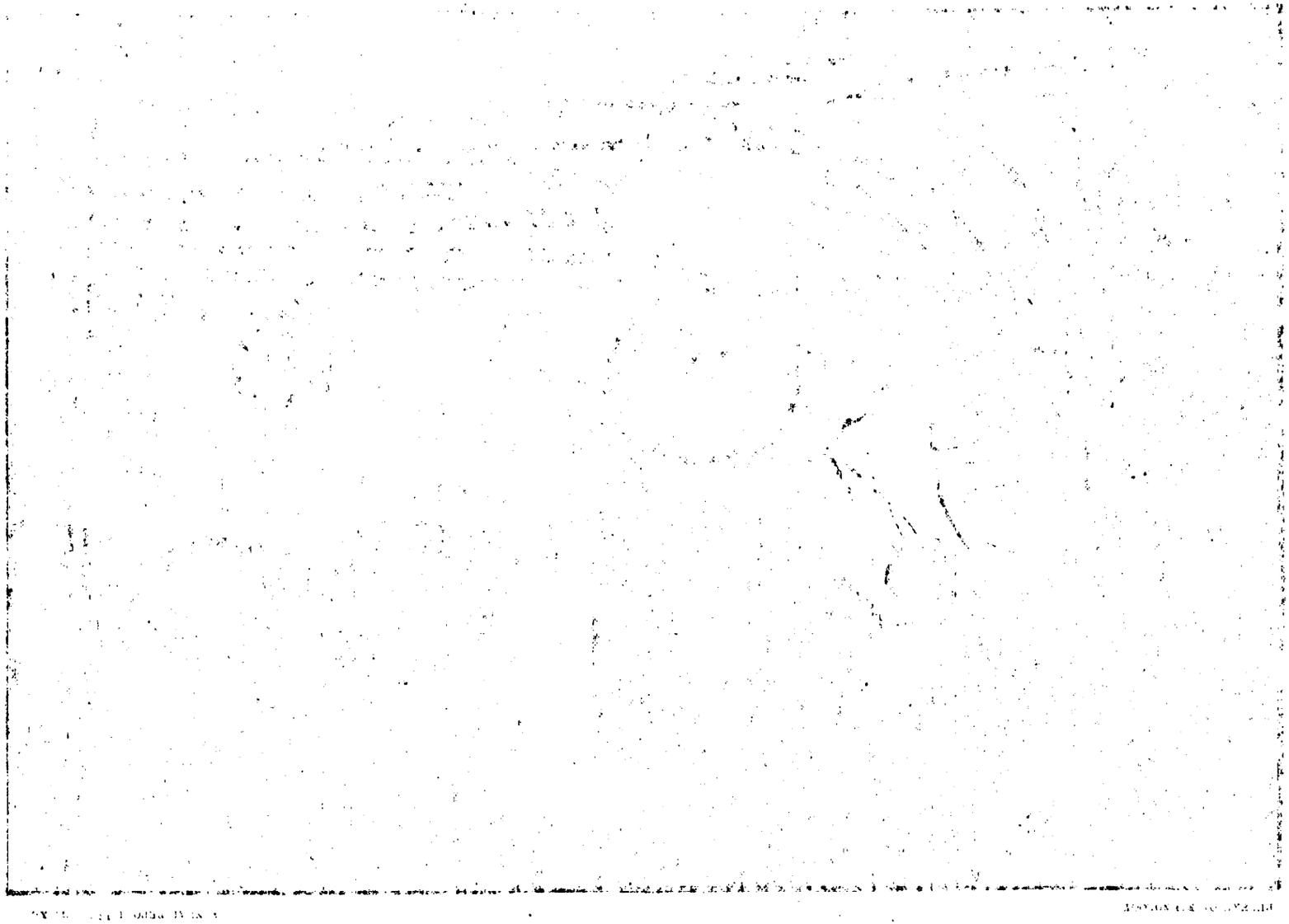
65947, 65948, 65985. Small stones used in polishing pottery. Te-kia-thlâ-kia-na-kia-á-we.

65967, 65946, 65975, 65997, 65973, 65950, 65981, 65965, 65966, 65951. Small stones used in polishing unburned vessels. Té k'ia-pi na k'iä-thlâ-k'ia-na-k'ia á-we.

65983. Large stone for polishing baking slabs. Á k'iä-thlâ-k'ia-na-k'ia á-a-le.

65982, 66000. Polishers. K'iä'-thlâ-na-k'ia a-we.

65964. Small polishing stone. A′ k'iä-thlâ-kia-na-k'ia á-tsa-na.
65993. Ditto, larger.
66048, 66047. Ditto, flat.
66050. Ditto, large, flat.
65972. Small polisher for glazing and smoothing pottery. Té k'iä-thlâ-kia-na-k'ia á-tsa-na, for use of which see pl. xl.
66053, 65969. Ditto, rude.
65949. Small stone used in polishing unburned vessels. Te′ k'ia-pi-na k'iä-thlâ-k'ia-na-k'ia-á-a-le.
66014, 66028, 66108, 66020. Pecking stones. Á tok-na-k'ia a′-we.
66067, 66066, 66065. Ornamented ancient pestles. I-no-to-na a-wa k'ú lu-lu-na-kia á-tesh-kwi-we.
66218. Ornamented small paint pestle. Hé-a-k'ia tú-lin-ne.
66260, 66277, 66278, 66279, 66268, 66280, 66265, 66281, 66282, 66283. Rubbing-stones used with a coarse metate for shucking and cracking corn. Tchú thlät-sa-k'ia-na-k'ia yäl′-li we.
65936. Ancient stone knife used in the ceremonial dance called the Hom′-ah-tchi, or war dance of the Kâ-kâ. Hom-ah-tchi awen ä-tchi-en-ne.
65934, 65933, 66310, 65937, 65931, 65932. Ancient war knives preserved for modern ceremonials.
3 Of the variety known as the "Há-mi-li-li tí-mush," or petrified wood-lance (archaic).
3 "Ti-mush shí-k'ia-na," or the black lance.
65929. Ditto, ground.
65930. Ancient rude stone knife. Ti-mush á-tchi-ën tsa-na.
66056. Thunder ball or stone used in the sacred ceremonial game of the priests. Ku-lu-lu-na-k'ia á-a-le.
66064, 66063, 66060, 66058. Small stone balls used in the sacred game of the Hidden ball. Í-än-k'o-lo ú-li-we.
66057. Small thunder ball used in the ceremonial game of the Hidden ball. Ku-lu-lu-na-k'ia á-k'iä-mo-li-a tsa-na.
66061, 66059, Thunder ball, plain, small.
66055. Ditto, large, used as a weight in the dye-pot.
65970. Ditto, large, rude, or irregular.
66323, 66326, 66327. Stones for baking tortillas and corn griddle-cakes. Hé pä-tchish-na-kia a′-we.
66328. Ditto, for baking guyave or paper-bread. Hel′-äsh-na-k'ia a-a-le.
66329. Ditto, small.
66044. Paint stone used as weight in dyeing. Thli-an-a-kia pá-u-li-k'ia á-a-le.
66068, 65928. Stones used as weights in the dye-pot. Thli-an á-k'ia pa wo lu-k'ia á-we.
66079, 66099, 66098, 66100, 66076, 66078. Sacred, ancient idol stones, concretions. A-thlä-shi á-yäl-up-na-we.



POLISHING POTTERY.

66080. Ancient stone idol found near the celebrated ruins in Eastern Tusayan, known as Á-wat-ú-ï, or Tala-ho-g'an. I-no-to-na-á tahlä-shi, hâ-i án-te-li-ah-nai-e.

66074, 66075, 66073. Small, disc-shaped stone quoits. Tan-ka-la-k'ia-na-k'ia á-we.

66052. Ditto, large.

65972. Stone for producing black paint of pottery, hematite. Té-tsi-na-k'ia á-k'win-ne.

66069. "Ancient stone." Á-thlä-shi.

66051, 66084. Tufas for tanning skins. Á-sho-a á-we.

69270. Concretion of sacred significance, or "old stone." Á-thlä-shi.

65935. Flat stone used as cover to cooking pot. Wo-le-a á k·os-kwi-ki'a.

66308, 66309. Pair of arrow-shaft raspers or grinders of sandstone. Shó tchish-ni-k'ia á-wi-pä-tchin-ne.

66081, 66082, 66083. Mauls for pounding raw-hide. Î-k'iäthl-thli tâk na-kia á-we.

2190. Very fine polishing stone for finishing baking-stones. Wa-lo-loa-k'ia-na-k'ia á-mu-luk-ton-ne.

2191. Ditto, flat.

2314. Small polishing stone. K'iä-thlâ-k'ia-na-k'ia á-a-le.

2315. Small paint pestle. Hé-a-kia tú-lin-ne.

2350. Stone axe with handle. O-la k'í thla-shi.

2321. Thunder ball with sacred head inlaid to secure good fortune, ancient. K'u-lu-lu-na-kia ha-lo-a-ti-na thle-a-k'ia-ni á k'iä-mo-li-an-ne, í-no-to-na.

2841. Concretion of sacred significance or "old stone." Á-thlä-shi.

2842. Ditto, red. Shí-lo-a.

2843. Ditto, black. Shí-k'ia-na.

1981. Knob of mineral (bitumen) used in polishing the inside of parching vessels, or glazing black during great heat. Wo-li-a-k'ia-té-thle-mon an té-hu-lin wó-pa-thlai-a-k'ia hé k'wi-nan-né.

2845. Small thunder stone ball used in the ceremonial game of Hidden ball. K'ú-lu-lu-na-kia ál-u-lin-ne.

2844. The "house of the hornets of creation". Tchïm-mï-k'ia-na-kia ó-hap k'iá-kwi-we.

2838. Lumps of yellow paint. Hé thlup-tsi-kwa mú-we (for pottery).

#### HUNTING AND WAR AMULETS

Composed of arrow points, stone knives, and carvings to represent the great animals of prey—we-ma-we—&c. These specimens have been retained by the Bureau of Ethnology for purposes of study, and consequently have no National Museum numbers. The numbers given them here pertain to the field catalogue.

1. Large stone figure of mountain lion, distinguished by a long tail curved lengthwise over the back; observe blood on black coating and turquoise eyes. Hâk-ti-täsh-a-na wém-me. Hunter God of the North.

2. Amulet, of white spar, with arrow head "above heart." Nicely carved, with ears and with small pieces of turquoise inserted for eyes; designated by Mr. Cushing as Prey God of the Hunt. Sä-ni-a-k'ia-kwe awen hâk-ti-täsh-a-na wém-me.
3. Ditto, of sandstone, without inlaid eyes. Stone arrow-head attached on right side.
4. Ditto, of alabaster, without flint.
5. Ditto, with flint at back, and showing traces of blood.
6. Ditto, of alabaster; very small.
7. Ditto, with traces of carbonate of copper, or the sacred blue medicine stone of the Zuñis.
8. Ditto, of banded spar, used in the ceremonial of paint-making in connection with the prayers for increase of animals, Í-sho-maia-k'ia.
9. Ditto, with arrow-point, coral (á la ho), white, shell disk (k'o-ha kwa) and abalone (sho-to-thlí än) ornaments bound about the region of the heart.
10. Representation of the great Hunting God of the West, the Coyote, in plain alabaster.
11. Ditto, in sandstone, inlaid with patches of green stone.
12. Ditto, in fine brown sandstone, inlaid with turquoise eyes.
13. Ditto, in alabaster.
14. Ditto, in alabaster, with flint chip at back.
15. Ditto, showing blood coating.
16. Ditto, in alabaster.
17. Ditto, ditto (small).
18. Ditto, in semi-translucent spar.
19. Ditto, in alabaster (small).
20. Ditto, in carbonate of copper.

20*a*. Ditto, ditto.

20*b*. Ditto, in banded spar, and used as No. 8.

21. Representation in pottery, with conventional decoration, of the Great Hunting God of the South, the Wild Cat, or Te-pi-wém. Very ancient.

22, 23, 24. Ditto, of soft chalky substance, short black tail and black ear-tips.

25. Ditto, in yellowish soft stone.
26, 27. Ditto, in alabaster (small).
28. Ditto, ditto (with hole for suspension).
29. Ditto, ditto (without hole).
30. Ditto, ditto (with flint chip at back).
31. Ditto, ditto (with arrow at side).
32, 33. Ditto, ditto (with flint chip).
34. Ditto, ditto (with white bead necklace and arrow point at back).
35. Ditto, with arrow point and carbonate of copper at back.

36. Representation of Great Hunting God of the South, the Wild Cat, fine soft sandstone, showing ornaments and arrow point and traces of blood, and inclosed in buckskin bag worn in the chase.
37. Ditto, in alabaster, very large, showing black snout, feet, tail, and ears.
38. Ditto, in dark sandstone, very large, with white shell, coral, and arrow point bound to back and sides.
39. Ditto, with arrow, arrow-point, and carbonate of copper at back.
40. Ditto, in sandstone, plain.
41. Ditto, ditto, eyes inlaid with turquoise.
42. Ditto, with white shell and arrow-point bound to side.
43. Wolf Fetich of the Chase, or Hunter God of the East, plain sandstone.
44. Ditto, alabaster, plain.
45. Ditto (ditto), small.
46, 47. Ditto, ditto, with arrow flake.
48. Ditto, of sacred bluestone.
49. ————.
50. Ditto, of banded spar, and used as remarked under No. 8.
51. Ditto, ditto.
52. Concretion representing the Great Hunting God of the lower regions; the Mole (K'iä-lu-tsi-wém), with white shell disks bound about neck and arrow point to the back.
53. Ditto, very small.
54. Piece of slag, slightly ground, to represent the Great Prey God of the upper regions, the Eagle, or K'ia-k'ial-i wém.
55. Great pray God, in yellow rock material, rudely shaped and provided with necklace of arrow-point, white shell beads, &c.
56. Ditto, very rude, of sandstone, without appurtenances.
57. Ditto, conventionally carved, with aperture at back for suspension; fine-grained red stone.
58. Ditto, in blood-stained alabaster, inlaid at back, breast, and eyes with turquoise.
59. Ditto, in alabaster, with carbonate of copper inlaid as eyes, and arrow-point placed at back.
60. Ditto, carved quite elaborately.
61. Ditto (very small).
62. Ditto, in sandstone, very small, and with necklace.
63. Ditto, very elaborately carved, and represented sitting on the ancient knife used in war expeditions to insure successful elusion of enemies.
64. Representing a quadruped with straight tail, ears, mouth, and feet tipped with black; turquoise eyes set in.
65. Wild-cat.
66. Ditto.

67. Coyote.
68. Ditto.
69. Represents an animal with short tail, large arrow-head attached to right side; carved from hard gypsum.
70. Small quadruped, carved from gypsum, short tail, ears projecting forward.
71. Wild-cat.
72. Ditto, in alabaster.
73. Representing an animal with a long body, with a small shell ornament attached to its back; carved from gray soapstone.
74. Wolf-cat.
75. Long-bodied animal, with shell ornament attached to back.
76. Ditto, without ornament.
77. Represents a wolf carved from wood, with rude arrow-head attached to back.
78. Wolf.
79. Horse with saddle; white quartz; used in prayers to promote reproduction of herds. (Of Navajo importation.)
80. Animal with four outspreading limbs. Cut from small flat stone.
81. Coyote.
82. Wolf with arrow-head on back.
83. Quadruped with short thick body of fine-grained sandstone.
84. Similar to 83, with flint flake attached to body.
85. Probably designed for a wolf; flint flake on back.
86. Wild-cat.
87. Ditto.
88. Coyote.
89. Armlet of quartz crystal used in the formation of the medicine water of secret orders. Sai-a-ko-ma á-tësh-kwin-ne.
90. Ditto, in calcareous spar.
91. Ditto, in the form of a small cat, for use before the altar during the same ceremonial. Sai-a-ko-ma á-tësh-kwin-te-pi wém.
92. Ditto, in spar in the form of a pestle.
93. Ditto, in fine-ground, dark sandstone, in the form of a pestle.
94, 95. Small-banded spar pendants, used in the ceremonial described under No. 8.
96. Ditto, long, with a depression or groove about the middle.
97. One of the sacred ancient medicine stones. A-′ thlä-shi (a small fossil ammonite).
98. Ditto, a fossil univalve.
99. Ditto, concretion in form of human testicles and of phallic significance. Mo-ha a′- thlä-shi.
100. Ditto, slag, used as in No. 97.
101. Ditto, ditto, stalagmitic.
102. Ditto, chalcedony concretion, ditto.

103. Stone knife of obsidian, with string for suspension, used in ceremonial scalp taking—one of which is carried on journeys by each member of the Priesthood of the Bow, or Order of the Knife. Mó tsi-k'wash-na kia tí-mush.

104 to 125. Ancient flint knives preserved as amulets and relics of ancestors among the Zuñis.

125 to 150. Arrow points, &c., preserved by modern Zuñis as relics of ancestors, and amulets used in various ceremonials, &c.

Miscellaneous objects not numbered in catalogue:

Three bow-guards for children. Kém pas si-kwi-we.

Two small rattles for children. A-tsana awen chím-mo-we.

Three awls, used in the weaving of blankets and baskets. Sá si-mo-we.

Four sets of small flat sticks used in the game of tá-sho-li-we.

## ARTICLES OF CLAY.

### WATER JARS.

67548. Ancient water-jar, with the road of the clouds represented on the front. I-no-to-na té-mui-a mé-he-ton-ne.

67745. Very old water-jar in representation of an owl. Mu-hu-kwi mé-he-tâ' thlä-shi.

67757, 67752. Water-jars representing owls, small, new.

67758. Ditto, representing a duck. É-a mé-he-tâ.

67760. Ditto, smaller, having representation of butterfly.

67534. Small toy water-jar. I-k'osh-na-k'ia k'ia-wih-nï-k'ia-té tsa-na.

67313. Small girl's water-jar, or olla É-tsa-na a k'iá-wih-nï-k'ia té-tsa-na.

66496. Small toy water-jar of red ware. I-k'osh-na-k'ia k'ia-wih-nï-k'ia té shi-loa t'sa-na.

66451. Large olla, or water-jar, decorated with floral patterns. K'ia-wih na-k'ia té-le.

66401, 66349, 66366, 66442. Ditto, ancient terrace and rattlesnake decoration.

66432. Ditto, curve and bird pattern.

66549, 66369, 66460, 66374. Ditto, curve pattern.

66391, 66352. Ditto, with floral and bird pattern.

66422. Ditto, primitive sacred terrace and rattlesnake pattern.

66333. Ditto, with decoration representative of lightning and milky-way.

66468. Ditto, with rainbow and lightning pattern.

664[illegible]2. Ditto, with rosette, curve and deer patterns, and sacred birds reversed.

66364. Ditto, floral rosette, and deer patterns, with central band containing the conventional bird.
66417. Ditto, deer and floral patterns.
66539. Ditto, rosette, plant, bird, and deer patterns.
66545, 66331. Ditto, rosette, deer (po ye) patterns.
66343. Ditto, rosette, bird, and curve pattern.
66385. Ditto, curve, star rosette, and bird pattern.
66346,66454. Ditto, small, deer and bird decoration.
66537. Ditto, with star flower rosette, deer, and terrace conception of the sky.
66341. Ditto, with deer (Na'-tsi-na) and Quail (or Pó-yi) decoration.
66439. Ditto, with deer and floral decoration.
66388. Ditto, with deer, rabbit, and star-flower rosette.
66420. Ditto, with deer and star-flower rosette decoration.
66353. Ditto, small, with young deer.
66526. Ditto, with arabesque terrace and rattlesnake pattern.
66548. Ditto, with curve and po ye pattern.
66418. Ditto, with primitive terrace pattern.
66351. Ditto, with curve and star rosette decoration.
66336. Ditto, with curve and Pó-yi decoration.
66469. Ditto, with curve decoration.
66462. Ditto, with zigzag and floral patterns.
66477. Ditto, very small sky pattern.
66521. Small toy water jar (modern). I-k'osh-na-k'ia té-tsa-na.
66443. Elegantly ornamented toy water jar, in primitive style of decoration. Í-k'osh-na-k'ia té-tsa-na, í-no-to-na ik-na tsí-na-pa.
66482. Ancient water jar of red ware. Í-no-to-na k'iá-wih-na-k'ia té-thla-na.
66440. Small girl's water jar, decorated with floral designs in red and black. É-tsa-na an k'iá-wih-na-kia té-tsana.
66513. Ditto, of red ware in imitation of ancient.
66491. Ditto, ancient, with bird decoration.
66480. Ditto, ancient, with conventional design.
66342. Ancient water jar from the ruins of *K'iä-k'i-me* (Home of the eagles), an ancient Zuñi pueblo near the base of the mesa of *Tâ-ai-yäl-lon-ne.*
66486. Ancient small water jar, beautifully decorated with red and black designs on a cream body, from the ruins of *Wi-mai-a*, one of the ancient Zuñi pueblos on the north side of the valley of Zuñi, the birth-place of the grandparents of a living aged Zuñi named "*Ú-pe-kwi-na.*"
67310. Small water jar of red ware. Ê-tsa-na an té-shi lo a.
66444. Water jar, or olla, with star and flower decoration. Kia-wih-na-k'ia té-le.
66394. Ditto, with ancient terrace and arrow decoration.
66547. Ditto, with deer and quail decoration.

66361. Ditto, with curve decoration.
66416. Large jar decorated with ancient figures, and used as receptacle for sacred plumes. Lá po-kia té-le.
66357. Very ancient rattlesnake and sacred terrace water-jar. I-no-to-na k'ia-wih-na-kia té-li, a-wi-thluia-po-na, tchi-to-la, ta yä'-to kia pä'-tchi-pa.
66379. Ditto, modified.
67482. Small toy water jar, paint pot.
66533. Ditto, bird and deer decoration.
66338. Ditto, bird and rosette decoration.
66445. Ditto, rosette and small red wing decoration.
66467. Ditto, with chevron of lightning and milkyway.
66431. Ditto, small rosette and star decoration.
66479. Very large, small-mouthed plume jar. La-po-k'ia té-thlana.
66483. Ditto, very large and very ancient.
66485. Ditto, for water used by inhabitants of large mesas.
66449. Ditto, ancient terrace and rattlesnake decoration.
66475. Ditto, primitive terrace and arrow decoration.
67550. Large, bird-shaped ancient jar with handle. E-a té mu-to-pa (í-no-to-na). See fig. 2, pl. xli.
66424. Jar made in imitation of treasure jar, found in ruins of *Wí-mai a*. Thlá wo-pu-k'ia té-tsa na í-no-to-na án-te-li-ah-na yó-k'oa.
66350. Small broken jar with representation of Maximillian's jay. K'ia wih-na-k'ia té-tsana mai-a wó-pa-no-pa.
66356, 66344, 66406. Ditto, with antelope design.
66484. Ditto, ground-sparrow decoration.

### WATER BOTTLES.

67342. Small, double-lobed water bottle. Mé wi-k'i-lik-ton í-yäthl täsh-sha-na.
66376. Very large water bottle with elaborate ancient fret design, for purposes described under 66485, with holes to facilitate handling and pegs for suspension. This remarkable specimen has been handed down from generation to generation since the time of the habitation of Tã ai yäl lon ne.
68546. Ornamented water bottle of basket work. Hâ-i tóm tsi-na-pa.
67316. Small red water jar for child. K'iá wih-na-k'ia té tsa-na thlúp tsi-na.
(66506.) Water jar for making yeast, of yellow ware. Mo-tse ópi-k'ia-na-k'ia té thlup-tsi-na.
66507. Yeast-water-making jar of yellow ware. Mo-tse k'ia-nan ona-kia té thlup-tsi-na.
66474. Small water jar for children. K'iá wih-na-k'ia té tsa-na.
Small water jar for children. K'iá-wih-na-k'ia té tsa-na.
66461. Kia-wih-na-k'ia té tsa-na.

67536. Yeast-water-making jar of yellow ware. Mo-tse k'ia-nan ona-kia té thlup-tsi-na.

67558. Large vase in representation of knit moccasin, used as a toy. We-po-tcha té-tsa-na í-k'osh-na-kia.

66392. Large water jar or olla. K'iá-wih-na-k'ia té thla-na.

66541. Large water jar or olla. Kiá-wih-na-kia té-le.

66371. Small water jar for children. K'ia-wih-na-k'ia té-tsa-na.

—— Yeast-water jar of red ware. Mo-tse k'ia-nan ona-k'ia té-shi-lo-a.

67330. Water jar with representations of deer, etc. K'iá-wih-na-k'ia té na-pa-na-pa.

66436. Water jar. K'ia-wih-na-k'ia té-le.

66404. Large water jar, with ancient zigzag decoration, referring to the four wombs of earth and the darts with which they were broken open for the liberation and birth of mankind. K'iá-wih na-k'ia té-le, a-wi-ten té-huthl-na, awi-thlui-a-po-na tsí-na-pa.

66398. Small water jar. K'ia-wih-na-k'ia té tsa-na.

66518. Small toy water jar or olla of red ware. K'ia-wih-na-k'ia té tsa-na shi-lo-a, á-tsa-na awa.

66368. Small child's water jar or olla. Tsan-'an kiá-wih-na-k'ia té-tsa-na.

66389. Large water jar or olla. K'iá-wih-na-k'ia té-thla-na.

66359. Small water jar or olla. K'iá-wih-na-k'ia té tsa-na.

66465. Small toy water jar or olla. K'iá-wih-na-k'ia té tsa-na í-k'osh-na-k'ia.

66473. Large white olla or water jar. K'ia-wih-na-k'ia té k'o-ha-na.

—— Small sacred water jar with terraced rim. K'iá-pu-kia awi-thlui-a-po-na té tsa-na.

66476. Small olla or decorated water jar, ancient. I-no-te k'iá-wih-na-k'ia té tsa-na.

—— Jar or olla decorated in ancient emblematic style, and used as a receptacle for sacred plumes. Lá-po-k'ia té-le.

66446. Small decorated water jar or olla for children. K'ia-wih-na-k'ia té tsa-na.

66420. Small decorated water jar or olla for children. Á-tsa na awa k'iá-wih-na-k'ia té tsa-na.

67347. Large double salt-jar. Ma-po-k'ia té-thla-na.

66377. Small water jar or decorated olla. K'iá-wih-ni-k'ia té tsa-na.

66544. Water jar or decorated olla. K'ia-wih-na-k'ia té-le.

—— Small red jar for mixture of hé k'i or batter. Hé-k'i wó-li-kiá sá-tsa-na.

67517–67516. Small jars for black plume-stick paint. Ha-k'win hé-li-po-k'ia té-tsa-na.

67532. Small toy olla or water jar of red ware. Í-k'osh-na-kia k'iá-wih-na-k'ia-té-tsa-na.

—— Water jar or old olla, decorated with figures of antelope and sacred birds. K'iá-wih-na-k'ia té thlä-shi-na, ná-pa-no-pa, wó-tsa-na wó-pa-no-pa.

67321. Small yellow water jar or olla. K'iá-wih-na-k'ia té-tsa-na thlúp-tsi-na.

66373. Decorated water jar or olla. K'iá-wih-na-k'ia té le, hé-pa-k'i wó-pa-na-pa.

66453. Small decorated water jar or olla. K'ia-wih-na-k'ia té-tsa-na.

66351–66410. Large decorated ollas or water jars. K'iá-wih-na-k'ia té-we, á-thla-na

66423. Small decorated water jar or olla. K'ia-wih-na-k'ia té tsa-na.

66450. Small toy olla or decorated water jar. I-k'osh-na-kia té tsa-na.

66520. Red ware salt jar with castellated and corrugated edges and rim. Má-po-k'ia té-shi-lo-a mú-to-pa.

——— Small decorated olla or water jar. K'ia-wih-na-k'ia te tsa-na.

66399. Child's small water jar or decorated olla. K'ia-wih-na-k'ia té tsa-na a-tsa-na áwa.

———. Small decorated water-jar or child's olla. K'iá-wih-na-k'ia té tsa-na a-tsa-na áwa.

66413. Water jar or olla on which the emblematic terraces of the four wombs of earth and the magic knife with which they were opened are conspicuous decorations. K'iá-wih-na-k'ia té-le, á-wi-ten té-huthl-na, á-wi-thlui-a pa push-kwai-na pä'-tchi-pa.

66387. Small decorated water jar or olla, with figures of deer. K'iá-wih-na-k'ia té tsa-na, shó-ho-i-ta pá-tchi-pa.

66428. Small decorated water jar or olla. K'iá-wih-na-k'ia té tsa-na ná-pa-na-pa.

———. Large double salt and pepper jar. Má-po-kia té-wi-pa-tchi-na.

66354. Water jar, large, decorated. K'iá wih-na-k'ia té le.

66466. Water jar or olla decorated with ancient design of the rattlesnake gens. K'ia-wih-na-k'ia te-le, i-no-to-na Tchí-to-la-kwe a-wa tsí-nan tsí-na-pa.

66334. Water jar or decorated olla. K'ia-wih-na-k'ia te-le.

66463. Olla or decorated water jar with figures of sacred birds and rosette. K'ia-wih-na-k'ia te-le, wó-tsa-na ta hé-pa-k'i wó-pa-no-pa.

66337. Olla or water jar decorated with figures of sacred blue birds. K'iá-wih-na-k'ia té-le, k'iä'-she-ma-maí-a wó-pa-no-pa.

66457. Olla or decorated water jar. K'iá-wih-na-k'ia té-le.

———. Olla or water jar decorated with figures of deer, growing plants, and the gentile quail or chaparral cock. K'iá-wih-na k'ia té-le, ná-pa-no-pa, pó-yi ta kwan-haí-apä'-tchi-pa.

66405. Olla or decorated water jar. K'iá-wih-na-k'ia té-le.

66345. Small water jar or decorated olla, ancient design. K'iá-wih-na-kia té tsa-na, i-no-to-na tsí-na-pa.

66492. Small, line decorated red earthen water jar. K'ia-wih-na-k'ia té-tsa-na, shi-lo-a tsí-na-pa.

———. Small sacred water jar in form of mud hen. Hí-lu-k'ia mé-he-tâ tsa-na.

[illegible] decoration.

[illegible]

[illegible] and decoration.

[illegible]

[illegible] of red ware used for [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] decoration.

[illegible] decoration.

[illegible]

[illegible] decoration.

[illegible] decoration.

[illegible]

[illegible]

[illegible]

[illegible] decoration [illegible]

[illegible]

## [illegible] CANTEENS.

[illegible]

[illegible] of mamma. [illegible]

[illegible], 67738. [illegible] shaped.

[illegible] red canteen [illegible]

[illegible] its [illegible] decoration [illegible] water (the [illegible] decoration, water its [illegible] and a [illegible]. [illegible] See fig. 3, pl. xli.

[illegible] Red ware [illegible]

[illegible] Yellow ware [illegible] canteen. [illegible]

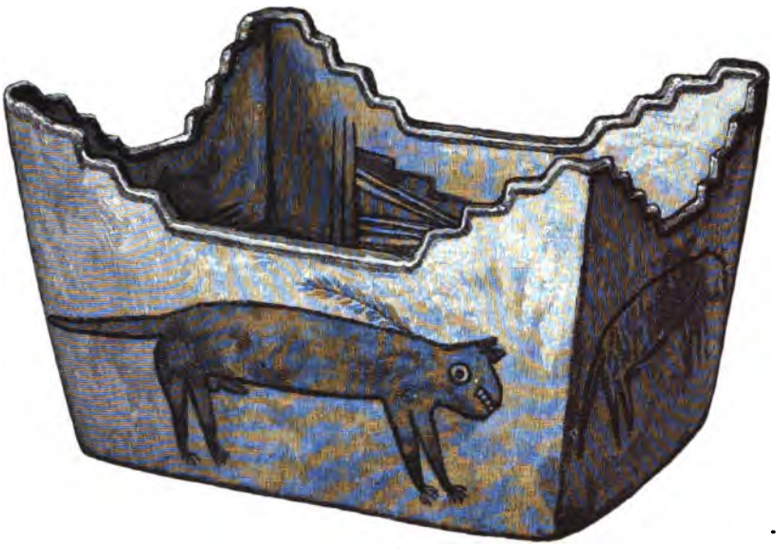
[illegible] Long [illegible] shaped canteen of red ware. [illegible]

[illegible] of chaparral cock. [illegible]

[illegible] in form of [illegible]

67[illegible] Brown canteen [illegible] in form of bag. [illegible]

[illegible] red ware canteen, with white decoration at back. [illegible]



(67343)
1

(67550)
2

(68201)
3

ZUÑI VASES AND CANTEEN.

68184. Canteen, red ware.
67807, 68213. Ditto, yellow ware.
68208, 69864. Ditto, red ware, large.
68187. Ditto, white ware.
68218. Ditto, red ware, smaller.
68182. Ditto, large, yellow ware.
67815. Ditto, very small and crude.
68221. Ditto, large, white ware.
68216. Ditto, with white back and red belly.
68181. Ditto, red ware, repaired with pitch.
68183. Ditto, decorated ware with "Cachina" decoration.
68192. Ditto, decorated with carved leaf pattern.
68175. Ditto, small, decorated.
68170. Ditto, very large, white ware, ornamented with rosette decoration.
67876. Ditto, ditto, more elaborate.
68222. Ancient canteen, in form of young bird, found in a cutting of the Atlantic and Pacific Railroad on the eastern slope of Mt. San Francisco, Arizona, by W. R. Smith, and presented by him to F. H. Cushing for the U. S. National Museum.
67771. Small canteen representing an owl. Mu-hu-kwi mé-he-tâ-tsa-na.
67549. Double, long-necked canteen, connected by two tubes. Mé-wi-k'i-lik-ton í-täsh-sha wó-po-no-pa.
67547. Ditto, smaller.
68151. Small canteen of red ware. Me-he-tâ tsa-na, shí-lo-a.
67812. Large yellow canteen. Me-he-tâ thlup-tsi-na.
68223. Ordinary yellow canteen; same Indian name as preceding.
67754. Small canteen in the form of an owl. Mu-hu-kwi mé-he-ton-ne.
68193. Child's small canteen. Me-he-tâ, tsan án.
67791. Large, yellow ware canteen. Me-het-thla-na thlúp-tsi-na.
67787. Small canteen for children. Me-he-tâ-tsá-na.
67811. Yellow ware canteen decorated with the sun vine. Me-he-tâ thlup-tsi-na tsí-na-pa.
67785. Child's small canteen of red ware. Me-he-tâ tsa-na shí loa.
67790. Red ware canteen. This specimen is plain red; they are frequently decorated in bands and figures of white.
———. A small canteen for sacred water, representing an owl. Mú-hu-kwi k'iá-pu-k'ia mé-he-tâ tsa-na.
67814. Large canteen representing the moon, of red ware. Me-he-tâ shi-lo-a. Yä-tchn, ánte-li-ah-nai-é.
67808. Small double canteen. Me-wi-se-tâ tsa-na.
67792. Small canteen with emblematic decorations of sacred hooks. Me-he-tâ, ne-tsi-ko-pa.
68194. Yellow ware canteen. Me-he-tâ thlup-tsi-na.
68204. Small yellow canteen.

68212. Large yellow canteen. Me-he-tâ thlup-tsi-na thlá-na.
———. Sacred, decorated canteen.
68206. Small decorated canteen.
67824. Large, yellow ware canteen.
67759. Small canteen for holding sacred water, in form of an owl. K'iá-pu-kia mu-hu-kwi mé-he-tâ.
67796. Small red canteen with etchings of phallic significance. Mé-he-tâ shi-lo-a í-shoh-na tsí-no-na.(?)
68189. Small yellow ware canteen.
67789. Small decorated canteen. Me-he-tâ tsí-na-pa.
67813. Small yellow ware canteen.
68156. Large yellow ware canteen, with winding white band decoration. Me-he-tâ thlup-tsi-na, tsin'-u-lap-nai-é.
68205. Small yellow ware canteen, decorated with rosette. Me-he-tâ thlúp-tsi-na, hé-pa-kin pä-tchi-e.
68199. Small toy canteen. Í-k'osh-na-k'ia mé-he-tâ tsa-na.
68157. Canteen of red ware. Me-he-tâ, shí-lo a.
67795. Medium-sized canteen, decorated with figures of quail or road runner; the latter bird is quite abundant in Arizona, but not in the Zuñi country. This canteen is of a cream white color, the decorations being in black. Me-he-tâ, pó-yi wó-pa-no-pa.
67545. Barrel-shaped canteen with knob like ends, and representations of mammæ near the mouth, for milk or sweet drinks. Mé-wi-k'i-lik-ton-ne, kwí-k'ia-pa.
67816. Decorated canteen. Me-he-tâ thla-na-tsí-na-pa.
68168. Small red ware canteen.
67805. Small red earthenware canteen, with representation of a burning star at apex. Mé-he-tâ thlup-tsi-na tsa-na, mo-yä-tchu-thla-na pä-tchi tsí-nai e.
68163. Large red ware canteen with winding bands, in representation of serpent. Mé-he-tâ, tsín-u-lap-nai-é.
68162. Small red canteen.
69863. Red ware canteen.
69865. Large water bottle canteen. Mé-he-tâ, tóm täsh-sha-na.
68159. Small red ware canteen, without decoration.
67475. Small toy canteen of special significance, which can only be derived from a translation of the Indian name given it. Ku-ne-a í-k'osh-na-kia mé-he-tâ-tsa-na, í-se-to-na. "Clay for playing with which, canteen little, carrying itself," etc.
68220. Small canteen decorated with figure of lily. Me-he-tâ, u-te-a í-to-pa-na pä'-tchi-e.
68176. Large red ware canteen.
69861. Large yellow ware canteen, with figure of the morning star. Mé-he-tâ thla-na thlúp-tsi-na, mó-yä-tchun-thlá-no-na pä'-tchi-e.
68173. Small red ware canteen with cone like apex.

67810. Small decorated canteen.
68179. Medium sized canteen, decorated on upper part with star cross. Me-he-tâ mó-se-wek-sin tsí-nai-e.
———. Small canteen of red ware.
67797. Small canteen of red ware.
68169. Small decorated canteen, with rosette on the apex. Î-k'osh-na kĭa me-he-tâ tsa-na hé-pa-k'i tsín-yäthl-tâi-é.
69875. Cānteen, medium size, of red ware.
67801. Similar to the preceding, but of cream white ware. Me-he-tâ iú k'o-ha-na.
68166. Same as preceding, of yellow ware, with representation, on cream-white ground, of sacred-feathered, cross-bows. Pí-thla-pätchi lá-kwai tsí-nai-e.
67806. Ditto, ditto, red shí-lo-a.
68217. Ditto, white, with representation of rattlesnake. K'o-ha-na, tchí-to-la pä'-tchi-e.
69862. Ditto, red, with representation of cloud on apex. (Ló te-po-ai-e.)
67540. Small toy canteen, with small neck.
———. Owl-shaped canteen.
67755. Same as preceding in form, but differing somewhat in the details of ornamentation.
68155. Small double canteen, or "child carrier," with representation of wreath of flowers. Me-he-tâ tsa-na tcha-se-tâ, ú-te-a ú-lap-na-ai-e.
68214. Ditto, larger with representation of sacred star rosette. Hé-pa-k'i-wó-pa-nan, mo-yä-tchu pán-ni-na-k'ia ú-le.
68158. Large canteen of red ware with rattlesnake emblems on white ground. Me-he-tâ tsi-na shí-lo-a ,tchí to-la wí-to-pa-no-pa.
67788. Ditto, red. Shí-lo a.
67823. Ditto, white, with depression on lower side. K'o-ha-na, hé-k'âi-é.
67794. Ditto, gray, with conical back. Lo-kia-na, k'iä'-möstâ'i-é.
68195. Ditto, small, with representation of flower at back and string for suspension. Tsa-na ta ú-te-a wó-pa-no-pa; pí k'ai-a-pa.
68210. Ditto, large red ware.
68153. Similar to preceding.
68215. Ditto, with cord for suspension.
68219. Ditto, without cord.
69867. Ditto, large.
67804. Ditto, small.
———. Ditto.
68160. Ditto, yellow.
———. Ditto, with sunflower rosette at apex. Ó-ma-tsa-pa-ú-te-a yä'thl-tâi-e.
67820. Ditto, white.
———. Ditto, white back and black base.

68191. Very large canteen of the cream-white ware, with red belly. Kô-ha-na, ta tsú-shi-lo-a.
68180. Ditto, plain, with rosette. Hé-pa-k'in pä'-tchi-e.
68188. Ditto, with the ring, or star-pointed flower, on apex; red base, above which are the figures of the sacred butterflies represented in an arch. Ní-tse-k'o-an-te ú-te-a thluai-a-pa, pú-la k'ia-thlu-ai-yé-mük-nai-é.
68152. Ditto, with rattlesnake. Tchi-to-la tsím-u-lup-nai-e.
67802. Ditto, smaller. Tsa-nï-shi.
67821. Ditto, very small yellow ware. Hish-tsá-na, shi-lo-a tsí-na-e.
68171. Ditto, red. Shí lo a.
67793. Ditto, larger, with cord of Spanish bayonet. Thlúp-tsi-na, hó, pi-k'ai-a-pa.
68167. Ditto, very large.
68161. Ditto, white, with sunflower, surrounded with speckled leaves and with smaller lobe at apex. Ô-ma-tsa-pa ú-te-a, su-pa-no-pa haĭ-a-we ú-lap-nai-e; tchá-set tâi-e.
67799. Ditto, plain red, with flower and butterfly decoration. Shi-lo-a, pú-la-kia kwin-ne, ta ú te-a pä'-tchi-pa.
67817. Ditto, small, with representation of corn stalk surrounded by deer, crows, and black birds. Mí-tâ-an, shó-ho-i-ta, k'wá-la-shi ta tsuí-ya pä'-tchi-pa.
---- - Ditto, with rosette at apex. He-pa-k'i pä'-tchi-pa.
68178. Ditto, plain. Tsa-na, á-ho-na.
68164. Ditto, red, large, and flat backed. Shi-lo-a, ki'a-pa yä'thl-tâi-e.
68154. Ditto, large, white, of ordinary form.
—— Ditto, with flower decoration at back. K'ia-mus-tâi ye, ú-te-a-pa.
68165. Ditto, small and flat. tsa-na, yäthl-k'iä-tchun.
—— Ditto, red belly, with deer and sky figures on white ground. K'o-ha-na yäthl-tâ, á-po-ya tsi-na, ta ná po-a-pa.
67813. Ditto, plain black. Kwin-ne.
68202. Ditto, yellow, with rosette decoration. Thlúp-tsi-na, hé-pa-k'in pä'-tchi e.
—— Ditto, very small, with white back. Tsa-na, k'ó-han-yä'thl-tâi-e.
67818. Ditto, large, yellow. Thlup-tsi-na.
—— Ditto, red and white, with terraced road. Tsa-na, a-wi-thuli-a-pó-na-pa.
68226. Ditto, large, with rosette decoration.
67544. Small, double lobed canteen. Me-wi-k'i-lik-ton kiä'-mo.lï-an tsa-na.
67541. Ditto, of smaller size.
67543. Ditto, small.
—— Owl-shaped canteen. Mú-hu-kwi mé-he-ton-ne.
67744. Ditto, small, with holes through the wings for suspension. E-pï-se à-a'-pa.
67742. Ditto, large, red ware. Mú-hu-kwi mé-he-tâ shi'-lo-a.

67748. Ditto, large, ornamented in representation of the plumage of a bird.
—— Ditto, small.
—— Small barrel-shaped canteen, with round ends, showing emblems of mammaries. Mé-wi-k'i-lik-ton, kwí-k'ia-pa kiä' molin aóp-tsi-nal-é.
68177. Canteen of earthen ware, decorated. Me-he-tâ tsí-na-pa.
67822. Ditto, small. Tsá-na.
68174. Ditto, of white ware. K'ó-ha-na.
68197. Ditto, of red ware. Shí-lo a.
68203. Ditto.
68190. Canteen of red ware. Shí-lo a.
68196. Ditto.
68200. Toy canteen, with rosette decoration. Î-k'osh-na-k'ia mé-he-tâ-tsa-na, hé-pa-k'i tsí-na-pa.
68185. Ditto, red. Shí-lo a.
67809. Ditto, with two small lobes at back. Î-yäthl-tâi-e.
67825. Small, double gourd-shaped water bottle of earthenware. Mé-wi-k'il-ik-ton shi-lo-a tsa-na.
67819. Large, bottle-shaped canteen. Mé-he-tâ k'iä-mo-lia muí-a-pa.
—— Small, decorated canteen. Mé-he-tâ.
—— Ditto, red ware, large.
—— Ditto, large, yellow.
—— Ditto, large, yellow ware with painted back.
—— Ditto, red ware, small.

PITCHERS.

67110, 67113. Pitchers, small, plain, with handle. É-mush-to-we á-thla na, á-mui-a-pa.
67439. Small pitcher vase, for suspension. É-mush-ton té tsa-na mú-to-pa.
67135. Small milking pitcher. Á-k'wi-k'iäsh-na-k'ia é-mush-ton tsana.
67101. Small, ancient pitcher. Î-no-to-na é-mush-ton tsa-na.
67103. Ancient pitcher, large.
66522. Ditto, of red ware.
67104. Ornamented pitcher, with representation of mountain lion for handle (broken). I-no-to-na é-mush-ton tsana, Hâk-ti-tä'sh-sha-na muí-ai-e.
67102. Ditto, rude.
67105. Ditto, large, decorated.
67116. Ditto, of red ware, decorated with black, long necked.
67141. Small, modern pitcher, of redware, in ancient style. I-no-to-na án-te-li-ah-no-nai-e.
67319. Ditto, large, with handle.
67119. Ditto, with handle, made in imitation of ancient jar, dug up from ruins of *Wi-mai-a.*
—— Small milk pitcher. Á-k'wi-k'iäsh-na-k'ia, é-mush-ton thlúp-tsi-na.

67551 Small milk pitcher in the form of a shoe or moccasin. K'wi-k'iäsh-na-kia we-po-tchi té tsa-na.
68384. Small pitcher of black earthen ware for heating water. K'iá-k'iäthl-k'ia-na-k'ia é-mush-ton-ne.
67137. Ditto, small, yellow ware.
67136. Small milking pitcher of yellow ware.
—— Milk pitcher, with handle, of decorated yellow ware. Á-k'wi-k'iäsh-na-k'ia é-mush-ton-ne.
68365. Small, black ware pitcher. Té-k'win tsa-na mui-ai-e.
67114. Small, decorated milk pitcher. É-mush-ton ne.
67089. Milk pitcher, plain.
67336. Ditto, large, with corrugated rim. É-mush-ton thlá-na.
67485. Ditto, with serpent or curved decoration. (Né-tsi-k'on-ne.)
67127. Large, red milk pitcher. Á-k'wi-k'iäsh-na k'ia é mush-to thla-na, shí-lo a.
67140. Ditto, undecorated.
67128. Ditto, plain.
68382. Ditto, for cooking. Wó-li-a-k'ia é-mush-ton thla-na.
68386. Ditto, small, tsá-na.
68383. Ditto.
68378. Ditto.
68385. Ditto, showing mud or clay used in sealing the mouth of the vessel while cooking sweet fermented meal or hé-pa-lo-kia.
68380. Ditto, plain.
68359. Ditto.
67106. Milk pitcher of ancient form. A-k'wi-k'iäsh-na-k'ia é-mush-ton, í-no-to-na.
67108. Ditto, with flaring rim and flower decoration. Sál-athl-k'ia-pan-ne.
67094. Ditto, plain.
67087. Ditto, for white paint. He-tehl-hé-lin on-a-kia, sál-äthl-k'ia-pan ne.
67124. Ditto, small, yellow ware.
67115. Ditto, with narrow opening, and flower decoration.
67139. Ditto, red ware.
67111. Ditto, decorated.
67117. Ditto, with scalloped rim.
67107. Ditto, tall, and vase-shaped, with flaring rim.
67339. Ditto, with contracted neck, and animal decoration, handle representing an antelope.
68356. Small pitcher for heating water.
68376. Large pitcher for cooking or heating water. Wo-li-a-k'ia é-mush-ton-ne.
—— Large pitcher with animal-shaped handle. É-mush-ton thla-na-wó-ò-le ík-na muí-ai-e.

DRINKING CUPS AND CUP-SHAPED VESSELS.

67091, 67337, 67076. Handled drinking cups with flaring rim, decorated. Tú-tu-na-kia sá-mui-a-pa.

67326, 67109, 67095. Ditto, large.

67086, 67083, 67112. Ditto, small.

67082, 67077. Ditto, with representation of bear for handle.

67122, 67118. Ditto, large, yellow ware.

67131. Small, red ware drinking cup with handle. Tú-tu-na-k'ia sá-mui-a tsán-an-ne.

67098. Drinking cup with flaring rim. Sá-mui-a sá-tsana.

—— Bowl and pot shaped cooking vessels, plain and ornamented, with ears and small conical projections to facilitate handling while hot; among these are also enumerated paint pots, &c. Sa-we á-mui-a-pa.

67469, 67425. Small, toy, cooking vessels with row of ears. I-k'osh-na-k'ia sá-mui-á-tsana.

67329. Large, handled cup. Sá-mui-an-ne.

68243. Small, handled cup. Sá-mui-a té-tsa-na.

68387. Water-holding cup. K'iá-pa-ti-k'ia té-tsa-na.

67322. Small handled cup of yellow ware. Sá-mui-a té-tsa-na thlúp-tsi-na.

67138. Handled cup of yellow ware. Sa-mui-a té thlup-tsi-na.

67079. Small, handled cup for water. K'ial-i-k'ia sá-mui-an-ne.

67078. Small handled water cup. Kial-i-k'ia sá-mui-an-ne.

—— Handled cup with decoration of the sacred mantle. Sa-mui a hé-k'wi-e-tchi tsí-na-pa.

67133. Small, handled, yellow ware cup. Sá-mui-an thlúp-tsi-na tsá-na.

67093. Small, handled cup with representation of growing flowers. Sa-mui-an-tsa-na ú-te-a wó-pa-no-pa.

68362. Small, knobbed cup for hot water. K'iá k'iäthl-k'ian-a-k'ia sá-mui-an tsá-na.

67132. Small, handled yellow cups. Sá-mui-a tsa-na á-thlup-tsi-na.

67081. Small flaring cup, with handle, with representations of stars and magic net-shield of war god. Sá-mui-an tsa-na sa-k'ia-pan-ne, mó-yä-tchu, ta k'iá-al lan pä-tchi-pa.

66911. Small flaring cup for children. Sá k'ia-pa-nan tsa-na.

—— Small red ware cups for children. Sá-tsa-na shi'-lo-a.

67126. Small milking cup of yellow ware, with handle. K'wi-k'iäsh-na-k'ia sá-mui-an tsa-na.

67335. Small cup, with handle and flaring rim, decorated with flowers. Sa-mui-an tsa-na, u-te-a äth'l-yel-lai-e.

67143. Small, handled cup. Sa-mui-a tsa-na shí-lo-a.

—— Small milking cup for little girl. A-k'wi-k'iash-na-k'ia sá-mui-an-tsa-na.

67090. Small, handled cup, with flaring rim for drinking. Sá mui-a tsa-na sál-athl-k'ia-pan-ne.

67092. Small, deep, decorated, handled cup. Sa tsa-na múi-ai-e.
67120. Large handled milking cup of decorated red ware. Á-k'wi-k'iäsh-na-k'ia sá-shi-lo-a, muí-an tsí-na-pa.
67084. Small, plain, handled cup. Sá-mui-an-tsa-na.
—— Small water heating cup, with handle. K'ia-kiäthl-k'ia-na-k'ia sa-mui-an tsá-na.
67332. Small drinking cup, with melon flower representation in center. K'iá-li-k'ia sá-tsa-na a-te-an e-tâi-e.
67096. Small handled cup. Sá-mui-an tsa-na.
67328. Large decorated cup with handle. Sá-mui-an thla-na.
67099. Decorated cup, small.
67097. Ditto, large.
67338. Ditto, with animal shaped handle.

BOWLS AND BASKETS.

67184, 67153, 67182, 67185, 67189. Sacred terraced basket bowls for medicine flour or meal, carried by chief priests of sacred dancers. K'ia-wai-a wo-pu-k'ia á-wi-thlui-a-po-na sá-mu-te-a-pa.
67193. Ditto, with horned frog represented on outside, (Thlé-tchu), and tadpoles and dragon fly inside, shu-me-ko-lo ta mú-tu-li-k'ia-wó-pa-no-pa.
67192. Ditto, with sacred rosette in center of bottom. Hé-pa-k'i tsin é-tâ-i-e.
67172. Ditto, for sacred yellow flower paint. Ú-te-a he-lin ó-na-kia.
67303. Small bowl for white paint, used in decoration of dancers. Hé-ko-hak' hé-lin-o-na-kia sá-tsana.
67055. Small white paint bowl. Hé-ko-hak' hé-lin-o-na-kia sá-tsana.
67255. Bread bowl, decorated. Mo-tse-na-k'ia sá-tsana.
67233. Ditto, larger.
67220, 67264. Bread bowls. Mo-tse-na-k'ia-sá-we.
67267, 67227, 67242. Large bread bowls, with elaborate cloud decoration and figure of sky combined. Mo-tse-na-k'ia sa-we á-thla-na, lo-po-ya tsi-na-pa.
67202. Very large bread bowl, decorated inside with lightning passing between clouds and on outer surface with lightning passing between black rain clouds. Mó-tse o-na-kia mo-tse-na-k'ia sá-thla-na; wí-lo-lo-a thli-tâ ló pi-kwai-nai-e wo-pa-no-pa; wí-lo-lo-a, áw-thlui-a-po-na á-shi-k'ia-na tsí-na-pa.
66604. Large bread bowl, decorated. Mó-tse-na-k'ia sá-thla-na.
66935. Ditto, red ware, large.
67277, 67270. Elaborately decorated bread bowl. Mó-tse-na-k'iasá-thla-na.
67217. Decorated bread bowl. Mo-tse-na-k'ia sá-thla-na.
66972. Small yellow ware eating bowl. Í-to-na-k'ia sá-thlup-tsi-na.
67199, 66937. Ditto, for dance paint of cachínas. Shi-lo-a-hé-lin o-na-k'ia sa-we.

66945, 66944. Ditto, for serving food, decorated.
67204. Ditto, large, with á-wi-thluia-po na ta thlí-ton (cloud-terrace and rain) represented.
66642. Ditto, white decorated ware.
66582, 66603, 66644. Ditto, with flaring rim. (Sál-athl-k'ia pan) deer decoration and sacred plume sticks.
66612. Ditto, with lozenge decoration in lozenge figure.
67209. Ditto, with highly emblematic decoration.
66574. Ditto, very shallow. Í-to-na-kia sal' athl-k'ia-pan-ne.
67215, 66947. Small yellow ware eating bowls. I-to-na-k'ia sá-thlup-tsi-na.
67066. Ditto, small.
66819. Small eating bowl. Í-to-na-k'ia sá-tsa-na.
66970, 66789, 66735, 66791. Ditto, used for paint.
66664. Eating bowl, larger.
66577, 67285, 66587, 67216. Ditto, large. Thlá-na.
66983. Small yellow ware eating bowl. Í-to-na-kia sá-thlup-tsi-na.
66938, 66941. Eating bowl, small, red ware. Shí-lo-a.
67206. Ditto, large.
66706, 66695. Ditto, of decorated ware.
65976. Ditto, for stone ash. (See above).
66956, 66916. Eating bowls, red ware white inside. I-to-na-kia sá shi-lo-a.
66600. Ditto, decorated ware showing use as paint bowl.
66832. Ditto, decorated ware, small.
66805. Ditto, decorated ware, showing use as dye bowl.
66798, 66784. Ditto, eating bowls.
67254, 66760, 66957, 66749. Ditto, burned in open fire. (K'ia-pi-na-ní-shi, or lú-ak-nai-e.)
56773. Ditto, deep.
66837. Ditto, small, burned in open fire. Lú-ak-nai-e.
67243. Ditto, showing traces of last hé-pa-lo-k'ia feast.
66848. Ditto, showing po-ye decoration.
66718. Ditto, showing sunflower decoration.
66831. Ditto, showing lineal decoration, ancient design.
67241. Ditto, very old.
66971. Ditto, showing house, world, and growing-plant design.
66761. Ditto, showing much use.
66993. Ditto, showing figures of pó-yi and gentile priests.
66739. Ditto, basin-shaped. Sál-athl-k'ia-pan-ne.
66908. Very small decorated toy eating bowl. I-k'osh-na-k'ia í-to-na-kia-sá-tsa-na.
67246. Small, decorated ware eating bowl.
66920, 67257. Ditto, new.
66830. Ditto, with elaborate star and plant design.
66783, 66765. Ditto, flower with four spear-like points in center. U-te-a-an k'iä-tso-ta wó-pa-no-pa.

67262. Ditto, burned in open fire. Lú-ak-nai-e.
66774. Ditto, with falling rain represented.
66727. Ditto, with flaring rim, deep.
66748, 66876, 66703. Small eating bowl of decorated ware. Í-to-na-k'ia sá-tsa-na.
66588, 66810. Ditto, with elaborate but defined decoration.
66779, 66711, 67265, 66827, 67301, 67271. Ditto, with deer reversed and standing on twig.
66792, 66755. Ditto, showing use as vessel for white paint (used as whitewash). Hé-k'e-tchu o-na-k'ia sá-we.
66776, 66918, 66781. Ditto, with flaring rim.
67203. Small eating bowl. Í-to-na-k'ia sá-tsa-na.
67278. Ditto, chaparral cock decoration.
67250. Ditto, burned on wood fire.
66741. Ditto, with river and tadpole represented.
66742. Ditto, ornamentation indistinct.
66632, 66551, 66553. Eating bowls of decorated ware, with flaring rim. Í-to-na-k'ia sál-athl-k'ia-pa-we.
66638, 66634. Ditto, large.
66636. Ditto, very large, with representation of female deer, ancient terrace house and "step" inclosed. Hé-wi-mäs-sin í-no-to-na, tá shó-hŏ-i-t'o-k'ia pä'-tchi-e.
67295. Ditto, large, with rain cloud, star, and plant decoration.
66697. Small eating bowl, with deer and cloud decoration. Í-to-na-k'ia sá-tsa-na.
66569. Ditto, with representation of sky colors about rim.
66619, 66570. Ditto, with flower and plant decoration.
66926. Ditto, with house decoration.
67235. Ditto, flower decoration.
67231. Ditto, with flower and plant decoration.
66595. Ditto, with plant decoration.
66678. Ditto, with representation of sand burs.
66656, 66677. Ditto, with representation of antelopes.
66668. Ditto, with cloud pueblos and rainbow decoration.
66552. Ditto, cloud, star, floral, and deer decoration.
66594, 66685. Ditto, floral decoration.
67297. Ditto, with representation of world and steps to the skies.
66673. Ditto, with terrestrial cloud and doe decoration.
66593. Ditto, with cloud and curve decoration.
66679, 66726, 66601, 66684. Ditto, ditto, decoration indistinct.
66580. Ditto, red ware, with sacred corns represented.
67213, 66653, 66772, 66927, 66699. Ditto, flowers and falling rain.
66579. Ditto, terrace decoration.
66640. Ditto, flower decoration.
66648. Ditto, butterfly, cloud, and plant decoration.
67211. Ditto, deer, cloud, rain, and plant decoration.
67269. Ditto, plant and cloud decoration.

66573. Ditto, curve decoration.
66649, 67208. Ditto, flower, cloud, and arrow decoration.
66616. Ditto, with elaborate decoration.
66701, 66955, 66948. Red ware eating-bowls.
67205. Yellow ware eating-bowl.
66954. Ditto, the Great star.
66788, 66680. Small eating-bowls.
66670. Ditto, with floral, cloud, and star design elaborately worked up.
66662, 67222, 66554. Ditto, elaborate design.
66663, 66671, 66651, 66561. Ditto, with terrace form.
66609. Ditto, curve.
66637. Ditto, deer.
66652. Large eating bowl, with elaborate emblematic but indistinct decoration.
66672. Ditto, with rainbow decoration.
66811. Small eating-bowl of decorated ware.
66676. Eating-bowl of decorated ware.
67275. Small ancient eating-bowl of corrugated ware, decorated inside. Íno-to-na ní-tu-li a í-to-na-k'ia sá-tsa-na.
66992. Eating bowl of gray ware, very ancient. Í-no-to-na í-to-na-kia-sá-tsa-na.
66690. Ditto, with representation of woods.
66936. Ditto, modern red ware.
66820, 67256, 66919, 66840, 66790, 66764, 67021, 66881, 66995. Small decorated eating bowls. Í-to-na-kia sá-tsa-na tsí-na-pa.
67019. Ditto, sacred design in terraces representing clouds and rain.
66836. Ditto, with sacred butterfly decoration.
67000, 67027, 67001, 67008, 66973. Small red bowls. Sá-shi-lo-a á-tsana.
66962. Small basin-shaped bowl. Sal-athl-kia-pan-tsa-na.
67244. Small bowl, with additional rim. Sá wi-yäthl ton-ne.
66974. Small yellow-ware bowl used in making the stone ash as yeast, and coloring matter, of blue guyave. Á-lu-k'ia-lin hé-thli-a-k'ian-a-k'ia, sá-thlup-tsi-na.
67058. Very small, rude toy bowl. Í-k'osh-na-k'ia sá-tsana pó-tcha.
67048. Ditto, of yellow ware.
67057. Very small, drinking cup of red ware.
67052. Bowl used for mixing mineral yeast and coloring matter of guyave and mush-bread. Á-lu-k'ia-li-k'ia sá-tsa-na.
67317. Vase-shaped bowl of white ware. Sá-k'ia-pa te-lé.
67180. Small scalloped-shaped medicine bowl. K'ia-lin-ona-kia sá-tsa-na ní-te-po-a-pa.
67157, 67166. Ditto, with terraced rim. (Á-wi-thlui-a-po-na.)
68247. Small black-ware bowl for toasting corn.
67013. Small decorated red-ware bowl. Sá-tsa-na shí-lo-a.
67446. Small toy bowl, decorated. Í-k'osh-na k'ia sá-tsa-na.
67284. Small ancient bowl. I-no-to-na sá-tsa-na.
67309. Ditto, red ware, modern.

66900. Small bowl. Sá-tsa-na.
67292. Large flaring eating bowl. I-to-na-k'ia sá k'ia-pa-nan thla-na.
66597. Eating bowl. I-to-na-kia sá-a-le.
66965. Eating bowl of black ware. I-to-na-k'ia sá-kwin-ne.
67165. Small sacred terraced bowl for medicine flour, with frog decoration. Á-wi-thlui-a sá-tsa-na ta-k'ia wó-pa-no-pa.
67028. Small red bowl. Sa-tsa-na shí-lo-ā.
66693, 66705. Small eating bowls. I-to-na-kia sá-tsa-na.
66959. Small eating bowl, with gourd and beaded plume stick decoration. Í-to-na-kia sá-tsa-na tá-po-a wó-le.
67042. Small red ware bowl, with flaring rim. Sal-yäthl-k'ia-pan tsa-na-shí-lo-a.
66922. Small bowl. Sá-tsa-na.
67070. Small bowl of red ware, made by child. A-tsa-na awa sá-tsa-na shí-lo-a.
66903. Small bowl, made by young girl in learning. Sa-tsa-na í-te-tchu-k'ia-no-na á-wi-te-la-ma á-wi-thlui-an an té-thlä-shi-na ú-le.
66720. Small bowl. Sá-tsa-na—with the four sacred terraces and altar-pictured center.
66631. Small eating bowl, with emblematic gourd-figure in center. Í-to-na-k'ia sá-tsa-na, wí-to-pa-na tsí-na-pa.
67224. Eating bowl, with figures of medicine flowers inside. I-to-na-k'ia-sa-a-le, ak-wa ú-te-a wo-pa-no-pa.
67155. Small sacred meal bowl, with representations of summer and winter emblems of water, the tadpoles and the frog. Á-wi-thlui-a-pa sá-tsa-na, mu-tu-li-kia ta tá-k'ia wó-pa-no-pa.
67167. Small terraced sacred meal bowl, with figures of tadpole or emblems in summer. Á-wi-thlu-i-a-pa sá-tsa-na, mú-tu-li-k'ia wó-pa-na-pa.
66655. Eating bowl. Í-to-na-k'ia sá-a-le.
66884. Small bow, with representation of the sacred cross-bows. Sá-tsa-na pí-thla-pa-na-pa.
66874. Small decorated bowl. Sá-tsa-na.
66939. Small plain eating bowl. I-to-na-k'ia sá-tsa-na.
66806. Small decorated bowl. Sá-tsa-na.
66949. Small yellow eating bowl, with representations of the sacred gourd. I-to-na-k'ia sá-thlup-tsi-na wí-to-pa-na shí-lo-a.
67198. Yellow eating bowl. I-to-na-k'ia sá-thlup-tsi-na.
66898. Small plain toy eating bowl. A-tsa-na a-wen í-to-na-k'ia sá-tsa-na.
67043, 67054. Small plain toy mush bowls. Í-k'osh-na-k'ia he-k'i wo-li-k'ia sá-we.
67281. Small toy eating bowl. Í-to-na-k'ia sá-tsa-na í-k'osh-na-kia.
66913. Small toy bowl. Í-kosh-nan-a-k'ia sá-tsa-na.
67051. Small he ki bowl. He-k'i wó-li-k'ia sá-tsa-na.
67177. Small scalloped medicine water bowl. K'ial'-in on-a-k'ia sá-tsa-na ní-te-po-a-pa.

67153. Small terraced bowl for mixing medicine flour. K'ia-wai-a o-na-k'ia, a-wi-thlui-a-po-na sá-tsa-na.
66808. Small bowl used as receptacle for white paint in the dance. He-k'o-ha he-k'i wo-li-k'ia sá-tsa-na.
66943. Small red-ware eating bowl. I-to-na-k'ia sá-tsa-na shí-lo-a.
66893. Small water bowl. K'iä-li-k'ia sá-tsa-na.
66698. Rude eating bowl, decorated with figures of birds. I-to-na-k'ia sá-tsa-na, wó-tsa-na wó-pa-no-pa.
66910. Small decorated water bowl. K'iäl-i-k'ia sá-tsa-na tsí-nai-e.
67146. Small decorated water bowl. K'iäl-i-k'ia sá-tsá-na tsí-na-pa.
67010. Small decorated red ware bowl. Sá-tsa-na shí-lo-a tsí-na-pa.
66985. Small red ware eating bowl. I-to-na-k'ia sá-tsa-na shí-lo-a.
67282. Small eating bowl, with cross lightning and star decoration on rim. Í-to-na-kia sá-tsa-na, tsi-na-wé-lo-lon, ta mó-ya-tchu po-ai-yäthl-yel-la.
66875. Small decorated plate. Sál-athl-k'ia-pan tsa-na.
66743. Small white eating bowl. Í-to-na-k'ia sá-tsa-na-k'ó-han-na.
66807. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
67007. Small red bowl, with flaring rim for water. K'iäl-i-k'ia sá-tsa-na-shi-lo-a sál-yäthl-k'ia-pan-ne.
66730. Small decorated mush bowl. Hé-k'us-na wo-li-k'ia sá-tsa-na.
67047. Small bowl for mixture of yellow paint. Thlúp-tsi-na hé lin-o-na-k'ia sá-tsa-na.
66750. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
66857. Small decorated eating bowl. Í-to-na-kia sá-tsa-na.
67061. Small yellow drinking bowl. Tú-tu-na-k'ia sá-tsa-na thlúp-tsi-na.
66816. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
66736. Small decorated eating bowl with flaring rim. Í-to-na-k'ia sá-tsa na sál-äthl-k'ia-pan-ne.
67259. Small decorated eating bowl. Í-to-na-kia sá-tsa-na.
66731. Small eating bowl with emblems of star in center. Í-to-na-k'ia sá-tsa-na mó-yä-tchun-thla-na é-tâi-e.
66823. Small eating bowl. Í-to-na-k'ia sá-tsa-na.
66793. Small eating bowl. Í-to-na-k'ia sá-tsa-na.
67045. Small water bowl. Tú-tu-na-k'ia sá-tsa-na.
66787. Ditto, flaring rim and representation of sacrificial plumes. Sal-yäthl-k'ia pan tethl na wó-pa-no-pa.
66794. Ditto, with representations of the rain clouds and falling rain at sunset. Ló-te-po-a-pa, ta yä-ton-kwa-ton te thli tâ pä-ni-le-a.
67247. Ditto, with the four rising terraces. Á-wi-thlui a ú-kwai-shon-nai-e.
67020. Ditto, marks indistinguishable. Tsi-na thlú-sho.
67244. Ditto, with representations of horses. Tush é-tâi-e.
66606. Ditto, white. K'é-ha-na.
66608. Water bowl, larger.
66669. Large bread bowl. Mó-tse-nï kia sá-thla-na.

66576. Ditto, with deer decoration, house in center, representations of man's abodes and sacred plumes. Ná-pa-no-pa, hé-sho-ta ta thla-pan lá-kwai-nai-é.

66622. Eating bowl with flower decorations. Î-to-na-k'ia sá-a-le, ú-te-a-wóthl-e-tâi-é.

66728. Ditto, small. Tsá-na.

66641. Ditto, large, with addition of sacred bird butterfly. Wó-tsa-na-pú-la-k'ia.

66740. Ditto, with cloud lines.

66704. Ditto, with flaring rim and lightning terrace design. Wé-lo-lo-a ta á-wi-thlui-a-po-na tsí-na-pa.

66586. Ditto, with same decoration.

66611, 67294. Ditto, larger.

67291. Ditto, large, with cloud decoration.

67212. Large plain yellow ware eating bowl. Î-to-na-k'ia sá-thla-na thúlp-tsi-na.

67210. Ditto, for mixing bread. Mó-tse-nï-k'ia.

67214. Ditto, very large with red rim.

66658, 66929, 66560. Decorated eating bowls. I-to-na-k'ia sa-thla-na tsí-na-pa.

66626, 67223. Large decorated bread bowls. Mó-tse-nï-k'ia sá-we á thla-na.

66657. Ditto, with ornate representation of sacred sky terraces and falling wind-driven rain in sunlight.

67229, 67230. Ditto, cloud and flower decoration.

66733. Small decorated eating bowl. Î-to-na-kia sá-tsa-na.

66766. Ditto, with sky terrace inclosing clouds.

66753, 66734, 66710, 66686, 66696. Ditto, with star flower.

67290, 66795. Ditto, for mixing white-wash. K'é-tchep o-na-kia.

66915, 66809. Ditto, with white cross decoration.

67006, 66883, 66880, 66850, 66800, 66785, 67225, 67148. Ditto, red ware.

67145, 66702. Ditto, yellow ware.

67011. Ditto, very small.

67296, 66887, Ditto, decorated.

67280, 66635, 67252. Large decorated bread bowls. Mó-tse-nï-k'ia sá-thla-na tsí-na-pa.

67286, 67258. Small sized bread bowls. Mó-tse-nï-k'ia sá-tsa-na.

67248. Bread bowl of ordinary size. Mó-tse-nï-k'ia sa-a-le.

67200. Scalloped medicine bowl. K'iä'-lin o-na-k'ia sá-ni-te-po-a-pa.

67178. Terraced bowl for the manufacture of the "yellow flower medicine paint," used in the decoration of the dance costume, or Kâ-kâ thlé-a-pa. Á-we-thlui-a-po-na sa-a-le, u-te-a hel-in o-na-kia.

66498. Small red bowl. Sá-tsa-na.

66620. Small bowl. Sá-tsa-na.

66590. Bread bowl. Mó-tse-nï-k'ia sá-a-le.

66567, 66625, 67266. Eating bowls. Î-to-na-k'ia sá-a-le.
66615. Eating bowl. Î-to-ná-k'ia sá-a-le.
68238. Large cooking bowl. Wó-le-a-k'ia sá-thla-na.
66564. Eating bowl. Î-to-na-k'ia sá-a-le.
66814. Small bowl. Sá-tsa-na.
66815. Small bowl.
66589. Eating bowl.
68314. Small cooking bowl with protuberances to facilitate removal from fire. Wó-le-a-k'ia sá mui-a-po-na.
67162. Small scalloped bowl. Sá-tsa-na ní-te-po-a-pa.
66865. Small bowl. Sá-tsa-na.
66851, 66692, 6680[illegible]. Small bowls.
66647. Large eating bowl. Î-to-na-k'ia sá-thla na.
67460. Small cooking bowl with protuberances to facilitate handling. Sá-mui-a-po-na tsa-na.
66821. Small bowl.
66946. Small red ware bowl for eating. Î-to-na-ki'a sá-tsa-na shí-lo-a.
68230. Cooking bowl with protuberances to facilitate removal from fire. Wó-li-a kia sá-mui-an-ne.
67187. Small terraced bowl for sacred medicine flour. Á-wi-thlui-a-po-na sá-tsa-na.
66914. Very small bowl with emblem of morning star. Sá-tsa-na, mó-yä-tchu-thla-na é-tâi-e.
66795. Small eating bowl. Î-to-na-k'ia sá-tsa-na.
67433. Small obliquely corrugated bowl. Sa-tsa-na k'é-te-kwi-äs-sël-a-pa.
67300. Small bowl.
66557. Large eating bowl. I-to-na-k'ia sá-thla-na.
66560. Eating bowl.
67232, 67234. Large eating bowls.
67026. Small bowl for mixture of stone ash used as yeast. Á-lu we sá-tsa-na.
66715. Small bowl.
66719. Small eating bowl with flaring yellow rim. Î-to-na-k'ia sá-tsa-na sa-kia-pa thlúp-tsi-na.
67067, 67062, 67065. Small red ware bowls for children. Sá-tsa-na-we, á-tsa-na á-wa.
67142. Small scalloped rimmed bowl, red. Sá-tsa-na shí-lo-a ní-te-po-a-yä'thl-yel-lai-e.
67306. Small red ware bowl. Sá-tsa-na shí-lo-a.
66778. Small decorated bowl. Sa-tsa-na tsí-na-pa.
66614. Mush bowl. Mú-k'ia-pa wó-li-k'ia sá-a-le.
68348. Small cooking bowl with protuberances for handles. Wo-li-a-k'ia sá-mui-an tsa-na.
68366. Small new cooking bowl with ears. Wó-li-a-k'ia sá-mui-an tsa-na.
67201, 66862–66854. Small decorated bowls. Sá-tsa-na-we, á-tsi-na-pa.
66990. Small red eating bowl. I-to-na-k'ia sá shi-lo-a tsá-na.

68305. Small cooking bowl with ears. Wó-lia-k'ia sá-mui-an-ne.
66627, 66580. Decorated eating bowls. Í-to-na-k'ia sá-a-le.
66713. Small decorated eating bowls. Í-to-na-k'ia sá-tsa-na.
66978. Small red bowl for mixture of he-k'i, a kind of white paint, also mush. He-k'i wo-li-k'ia sá-tsa-na.
67164. Small terraced bowl for sacred meal. Á-wi-thlui-a-po-na sá-tsa-na.
66860. Small decorated bowl. Sá-tsa-na.
67449. Small flaring toy bowl. I-k'osh-na-k'ia sá-k'ia-pan-an tsa-na.
67476. Small rude earthenware bowl, made by child. Á-tsa-na awa sá-tsa-na.
68292. Small cooking bowl of black ware, with ears. Wo-li-a-k'ia sá-mui-an tsa-na.
67287. Small bowl. Sá-tsa-na.
66700. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
66633. Old decorated eating bowl. Í-to-na-k'ia sa-a-le.
66951. Red ware eating bowl. Í-to-na-k'ia sá shi-lo-a.
67331. Small white handled bowl. Sá-mui-a k'ó-ha-na tsa-na.
66818. Small bowl with conventional representations of lightnings and growing shrubs. Sá-tsa-na, wí-lo-lo-a ta á-hai-a pä'-tchi-pa.
66879. Small decorated eating bowl for children. A-tsa-na awa í-to-na-k'ia sá-tsa-na.
68841, 66847. Small eating bowls with sacred dance decorations, etc. Sá-tsa-na, hé-wi-e-tchi tsí-na-pa.
66873. Small eating bowl. I-to-na-kia sá-tsa-na.
67031. Small red water-bowl. K'ia-li-k'ia sá-tsa-na shí-lo-ä.
68251. Small black ware bowl for poaching. Á-le-kwĭ-k'ia sá-tsa-na.
68364. Small bowl for cooking medicine herbs. K'iá-he-k'ia k'iäthl-k'ia-na-k'ia sá-mui-an tsa-na.
67345. Double salt and chili bowl. Ma-pu-k'ia té-wi-pa-tchin, muí-ai-e.
68328. Small cooking vessel with ears. Kiá kiäthl-k'ia na-k'ia sá-mui-an-tsa-na.
67308. Small plain yellow waterbowl. K'ia-li-k'ia sá-thlup-tsi-na tsa-na.
68239. Small cooking bowl with ears. Sá-mui-an tsa-na.
68231. Small cooking bowl with scalloped rim. Wó-li-a-k'ia sá-tsa-na-wí-kop-tchi-äthl-yel-ai-e.
66825. Small eating bowl. Í-to-na-k'ia-sá-tsa-na.
66912. Small decorated toy bowl. I-k'osh-na-k'ia sá-tsa-na.
68294. Small cooking bowl with ears. Wó-li-a-kia sá-mui-an tsa-na.
66751. Small eating bowl. Í-to-na-k'ia sá-tsa-na.
67279. Small eating bowl with figures of gentile quail or chapparrel, cocks, and flowers. I-to-na-kia-sa-tsa-na, po yi ta ä'-te-a wó-pa-no-pa.
68355. Small cooking bowl. Wó-li-a-k'ia sá-tsa-na.
67017. Small eating bowl. I-to na-k'ia sá-tsa-na.

66578. Large flaring rimmed eating bowl with figures of wing feathers, &c., for decoration. I-to-na-k'ia sá-thla-na sal-athl-k'ia-pan, la-kwai-na-tsín-e-tâi-é.

66571. Large eating bowl decorated with antelope sacred plumes and red lightning figures. I-to-na-kia sá-thla-na, na-pa-na, ta thla-pa-we pä'-tchi-pa.

67002. Small water bowl of red earthen with sunflower decoration in bottom. Sa-tsa-na shi-lo-a. O-ma-ta-pa-u-te-a é-tâi-e.

66969. Small red eating bowl with figure of star in center. Í-to-na-k'ia sá-tsa-na mo-yä-tchun é-tâi-e.

67014. Small flaring rimmed bowl with uncompleted decoration. Í-k'osh-na-kia sal'-yäthl-k'ia-pan shi lo-a, tsi-na yá-nam tsí-nai-e.

66890. Small drinking vessel with flaring rim. K'ia-li-k'ia sá-tsa-na.

66845. Small white eating bowl. Í-to-na-k'ia sá-tsa-na k'ó-ha-na.

68232. Small cooking bowl. Wó-li-a-kia sá-tsa-na.

68268. Small cooking bowl with ears. Wó-li-a-kia sá-mui-an tsa-na.

68291. Ditto, larger.

66846. Small eating bowl with representations of arrows. Í-to-na-k'ia sa-tsa-na, tí-mush wó-pa-no-pa.

67039. Small bowl for mixture of yellow flower paint. He-lin thlup-tsi-na on-a-k'ia sá-tsa-na.

67314. Ancient form of the sacred medicine bowl used by the order of the Rattlesnake. Tchí-k'ia-li-kwe a-wën kiä-lin o-na-k'ia sá-a-le. Tadpole and frog decoration.

66493. Small ornamentally painted yeast bowl. Mo-tse o-na-k'ia sá-a-le té-tsi-na-pa.

67154. Sacred terraced medicine water bowl of the order of the ancient knife; frog, and dragon fly decorations. A-tchi-a-kwe awën k'ia-lin ona-kia á-wi-thlui-a-po-na sá-thla-na.

67159, 67169. Ditto, small for medicine.

67195. Ditto, large, of resigned member of sacred order. Tchu-ne-k'oa-án.

—— Bowl. Sá-a-le.

66804. Bowl. Sá-a-le.

68256. Small bowl for heating water. K'iap-a-ti-k'ia sá-tsa-na.

68300. Small cooking bowl with small protuberating handles. Wó-li-a-k'ia sá-mui-an-ne.

67305. Eating bowl of yellow ware. I-to-na-kia sá-thla-na, tsi-na-shi-lo-a é-tâi-e.

66861, 67053, 66746. Small bowls. Sa-we-á-tsa-na.

67179. Small scalloped medicine water bowl. K'iä'-lin o-na-k'ia ní-te-a-po-na sá-a-le.

—— Small phallic meal bowl with emblematic terraces. K'ia-wai-a wó-li-k'ia á-wi-thlui-a sá-tsa-na.

67194. Sacred medicine water bowl with emblematic terraces. K'iäl-in-ó-na-k'ia sá-thla-na.

66923. Small bowl with emblematic hook decoration. Sá-tsa-na né-tsi-k'o-pa.
66859. Small bowl with emblems of growing vines and flowers. Sa-tsa-na ä'-te-a ta pí-wa-na-pa.
66665. Small eating bowl. I-to-na-k'ia sá-tsa-na thla-e ta ú-te-a pä'-tchi-pa (with representation of sacred plume sticks and flowers.)
67170. Small sacred meal terraced bowl. Á-we-thlui-a-po-na sá-tsa-na.
66602. Large eating bowl. Í-to-na-k'ia sá-thla-na.
—— Small bowl with figures of the hunting-deer. Sá-tsa-na ná-pa-na-pa.
66675. Small eating bowl. I-to-nu-k'ia sá-tsa-na.
66855, 66780. Small bowls.
—— Small decorated eating bowl. I-to.na-k'ia sá-tsa-na tsí-na-pa.
67245. Large decorated bread bowl. Mo-tse nï-k'ia sá-thla-na.
66822. Small bowl decorated with sacred terraces. Sa-tsa-na á-we-thluia-pa tsí-na-pa.
66660. Eating bowl with flaring rim decorated with Kâ-ká checks. Í-to-na-kia sá-a le, su-po-li äth'l-yel-lai-e.
66967. Small yellow eating bowl with representation of scalloped lightning at rim. Í-to-na-k'ia sá-tsa-na thlúp-tsi-na wí-k'op-tchi-al-äthl-yel-lai-é.
66659. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na tsí-na-pa.
67218. Small eating bowl with representation of shield rosette. Í-to-na-k'ia sá-tsɔ-na, hé-pa-k'in é-tâ tsí-nai-e.
66572. Eating bowl decorated with figures of tufted jay. Í-to-na-k'ia-sa-thla-na maí-a wó-pa no-pa.
—— Large totemic eating bowl with representations of the gentile crane. Í-to-na-kia sá-thla na, á-no-te Kâl-ök-ta wó-pa-no-pa.
66707. Small decorated eating bowl. Í-to-na-kia sá-tsa-na.
67221. Small decorated eating bowl. Í-to-na-kia sá-tsa-na.
66940. Small red ware eating bowl. Í-to-na-k'ia sá-shi-lo-a tsa-na.
66666, 66599. Decorated eating bowls. Í-to-na-k'ia-sá-a-le.
66799. Small bowl.
67032. Small yellow bowl. Sá-tsa-na thlúp-tsi-na.
66767. Small bowls.
66966. Small red eating bowl, decorated. I-to-na-kia sá-tsa-na-shí-lo-ä.
66866. Small bowl with flaring rim and ancient terrace decoration. Sa-tsa-na, áthl-yäl-a-pan tsí na-pa.
66858. Small bowl. Sá-tsa-na.
66856. Small bowl with representations of birds and emblematic wings. Sá-tsa-na, wó-tsa-na, ta é-pïs-se wó-pa-no-pa.
66917. Small decorated bowl. Sá-tsa-na.
66886. Small flaring rimmed bowl. Sá-tsa-na sá-k'ia-pa-nanne.
66958. Small decorated eating jar. Í-to-na-k'ia té-tsa-na.
—— Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
66930. Large red eating bowl. I-to-na-k'ía sá-thla-na shí-lo-ä.

66617. Decorated eating bowl. Í-to-na-k'ia sá-a-le.
—— Small cooking bowl with ears. Wó-li-a-k'ia sá-mui-an-ne.
66568. Decorated eating bowl. Í-to-na-k'ia sá-a-le, ná pa-no-pa.
66987. Small red bowl. Sá-shi-lo-a tsa-na.
66797. Small, much-worn eating bowl. I-to-na-k'ia sá-tsa-na.
—— Eating bowl, remarkable for the decoration, which is an ornate representation of the God of the winged knife, or thunderbolt. I-to-na-k'ia sá-a-le, Ä-tchi-a la-to-pa, pá-tchi-é.
67239. Bread bowl with representation of sacred birds in rain storm. Mó-tse-na-k'ia sá-a-le, k'iä-she-ma wó-tsa-na wó-pa-no-pa.
66777. Small child's eating bowl. Í-to-na-k'ia sá-tsa-na.
67123. Small milk bowl of red ware, with handle. A-k'wi-k'iäsh-na-k'ia sá-mui-a shí-lo-a.
67160. Small sacred water bowl for suspension from hand in distribution of the medicine drinks; an example of the decorative style of the secret order of fire *Ma-k'e-tsá-na-kwe*—"little fire people"—to which it once belonged—during their public dance-ceremonials. Á-wi-thlui-a-po-na sá-a-le, Ma-ke tsá-na-kwe a-wa thle-ap ó-kwai-tu-no-na, shú-me-ko-lo, mú-tu-li-k'ia, ta tá-k'ia wó-pa-no-pa.
66737. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
67606. Small decorated bowl. Sá-tsa-na.
—— Small cooking bowl with ears. Wó-lia-k'ia sá-mui-an tsa-na.
—— Small plain red bowl. Sa-tsa-na shí-lo-ā.
67022. Small decorated bowl. Sá-tsa-na.
67238. Small decorated water bowl. K'ia-li-k'ia sá-tsa-na.
68283. Small cooking bowl. Wo-li-a-k'ia sá-mui-an tsa-na.
67049. Small rude toy white-wash-bowl. He-k'i wó-li-po-k'ia sá-tsa-na, í-k'osh-na-kia.
66868. Small decorated bowl. Sa-tsa-na áthl-yel-a-pa.
66999. Small plain red bowl. Sa-tsa-na shí-lo a.
66770. Small water bowl with decorations of the altar stones. K'ial-li-k'ia sa-tsa-na á-tesh-kwi pä'-tche-pa.
—— Small plain yellow bowl. Sá-thlup-tsi-na tsa-na.
68275. Small cooking bowl with protuberances for handling. Wo-li-a-k'ia sá-mui-an tsa-na.
66230. Plain yellow ware eating bowl. Í-to-na-k'ia sá-a-le.
66714. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na tsí-na-pa.
—— Small red eating bowl. Í-to-na-k'ia sá-shi-lo a tsa-na.
—— Small bowl with flaring rim. Sá-tsa-na sál athl-k'ia-pa-na.
67341. Small bowl of corrugated ware, made in ancient form. Ní-tu-li té-tsa-na.
—— Small terraced medicine meal bowl. K'ia-wai-a wo-li-kia á-wi-thlui-a-pa sá-tsa-na.
66747. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.
66924. Small bowl with flaring rim.

—— Small cooking bowl. Wó-li-a-k'ia sá-tsa-na.

57181. Ancient sacred bowl for medicine water. Í-no-to-na, Ti-kiĕn k'ial-i-k'ia sá-tsa-na.

67298. Large decorated eating bowl with flaring rim. I-to-na-k'ia sa-thla-na, sál-yathl-k'ia-pan-ne.

—— Large cooking bowl with ears. Wo-li-a-k'ia sá-mui-an-ne.

66817. Small water bowl with obliquely decorated flaring rim. Sa-tsa-na-áthl-yel-lai-e, tsi-na k'iä-shuk-ta áthl-yel-lai-e.

66853. Small bowl decorated with half lozenges at rim, and with growing field in center. K'ial-i-k'ia sá-tsa-na, wí-k'op-tchi-yäl-athl-yel-la, ta té-ä-tchi-nan é-tâ tsí-na-pa.

—— Small red eating bowl. Í-to-na-k'ia sá-tsa-na shí-lo-a.

—— Small cooking bowl with corrugated rim. Wo-li-a-k'ia sá-tsa-na, muí-yäthl-yel-la.

68242. Small cooking bowl with ears. Wo-li-a-k'ia sá-mui-an tsa-na.

66796. Small decorated eating bowl. I-to-na-k'ia sá-tsa-na.

68297. Large cooking bowl with ears. Wo-li-a-k'ia sá-mui-an thla-na.

69871. Bowl for heating water. K'iá-k'iäthl-k'ia-na-k'ia sá-a-li.

66953. Eating bowl of yellow ware. Í-to-na-k'ia sá-thlup-tsi-na.

68363. Small cooking bowl used for heating. Ki'athl-k'ia-na-k'ia sá-a-le.

67163. Small terraced bowl for the mixture of the sacred paint of flowers. U-te-a hé-liu-o na-kia á-wi-thluia-pa sá-tsa-na, shú-me-k'o-lo ta tá-k'ia wó-pa-no-pa.

67378. Portion of a pepper dish. K'ó wo-pu-k'ia té-le í-pä-tchi-nai-e.

—— Large decorated eating bowl. Í-to-na-k'ia sá-a-le.

66752. Small white eating bowl. Í-to-na-k'ia sá-tsa-na k'ó-ha-na.

67161. Small terraced bowl for mixture of sacred medicine water. K'ia-lin o-na-k'ia á-wi-thlui-a-pa sá-a-le, mu-tu-lï-k'ia wó-pa-no-pa.

67174. Small terraced medicine water bowl. K'iá-lin-o-na-k'ia á-wi-thlui-a-po-na sá-tsa-na.

—— Small red water bowl. K'ial-i-k'ia sá-tsa-na shí-lo-a.

66583. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.

66961. Small, plain, red eating bowl, white inside. Í-to-na-k'ia sá-shi-lo-a, k'o-han é-tâi-é.

67175. Small scalloped bowl, of knife order, for sacred water. Ní-te-po-a-pa k'iä-lin o-na-k'ia sá-tsa-na.

—— Small bowl for pouring the hot mush used in making hé-we or guyave. Hél-o na-k'ia-he-k'iäthl-k'ia sá-tsa-na.

66986. Small eating bowl of plain red ware. Í-to-na-k'ia sá-tsa-na shí-lo-a.

66729. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.

66867. Small decorated water bowl. K'ia-li-k'ia sá-tsa-na.

67276. Large decorated eating bowl. Í-to-na-k'ia sá-thla-na.

67679. Small red ladle bowl. Wo-li-k'ia sá-sho-kon mui-ai-e.

66869. Small decorated eating bowl. Í-to-na-k'ia sá-tsa-na.

66721. Small eating bowl with flaring rim. Í-to-na-k'ia sá-tsa-na, ä'thl-yel-lai-e.

67219. Small eating bowl with conventional representation of spotted lightning about the rim. Í-to-na-k'ia sá-tsa-na, wé-lo-lo-na sú-pa-no-pa tsí-na ä'thl-yel-lai-e.

66624. Decorated eating bowl. Í-to-na-k'ia sá-a-le, tsí-nai-e.

66996. Small bowl decorated in center with figure of tarantula among flowers or plants. Sá-tsa-na, ó-ha-tchi-k'ia-pa é-tâi-e.

—— Small red bowl with Gentile quail figured in center. Sá-tsa-na-shí-lo-a, po-yi tsín e-tâi e.

66885. Small decorated eating bowl, rim flaring. Sá-tsa-na sál-athl-k'ia-pan-ne.

66870. Small eating bowl showing burnt decoration. Í-to-na-k'ia sá-tsa-na, tsi-na tchá-pi-nai-e.

66838. Small decorated bowl. Sá-tsa-na tsí-na-pa.

66824. Small bowl with figure of morning star in center. Sá-tsa-na, mo-yä-tchun tsín e-tâi-e.

67080. Small handled bowl with ornate figure of one of the God stars. Sá-mui-an tsa-na, té-thlä-shi-na tsín-mo-yä-tchu é-tâi-e.

—— Small flaring yellow earthen bowl. Sá-tsa-na thlúp-tsi-na sál-athl-k'ia-pan-ne.

67307. Small yellow earthen water bowl. K'iä'-li-k'ia sá-thlup tsi-na-tsa-na.

66694. Small deer decorated eating bowl. Í-to-na-k'ia sá-tsa-na ná-pa-no-pa.

67024. Small decorated bowl. Sá-tsa-na tsí-na-pa.

—— Small terraced basket bowl for sacred flour. K'iá-wai-a wó-pu-k'ia á-we-thlui-a-pa sá-tsa-na, mú-te-po-a-pa.

66889. Small flaring rimmed red drinking bowl. K'iä'-li-k'ia sál-athl-k'ia pan tsa-na.

66618. Very old eating bowl. Í-to-na-k'ia sá-thlä-shi.

68233. Small cooking bowl with protuberances. Wó-li-a-k'ia sá-mui-an-ne.

67456. Small saucer shaped toy bowl. Á-tsan awa sál-athl-k'ia-pan tsa-na.

68272. Small cooking bowl. Wó-li-a-k'ia sá-tsa-na.

—— Small shallow decorated eating bowl. Í-to-na-k'ia sá te-ko-ni tsa-na.

67025. Very small eating bowl for children. Á-tsa-na awa í-to-na-k'ia-sá-tsa-na.

66833. Ditto, with figure of wild sunflower. Tsan-awa í-to-na-k'ia sá-tsa-na, o-ma-tsa-pa tsín e-tâi-e.

66756. Small decorated flaring rimmed eating bowl. Í-to-na-k'ia sá-tsa-na sál-athl-k'ia-pan-ne.

—— Small red flaring bowl. Sál-athl-k'ia-pan tsa-na shí-lo-a.

66683. Large decorated eating bowl. Í-to-na-k'ia sá-thla-na.

66621. Ditto, flaring rim with house and flowers represented in center. K'iá-kwe, ta ú-te-a ú-lap-na tsín e-tâi-e.

—— Ditto, with flower decoration inside. Ú-te-a wó-pa-no-pa.

66559. Ditto, with sacred terraces and flowers. Á-we-thlui-a ta ú-te-a wó-pa-no-pa.

—— Eating bowl, small, red. Shí-lo-a, tsá-na.

66864. Ditto, with flaring rim and representations of lightning and sacred plumes. Téthl-na ta wí-lo-loa wó-pa-no-pa.

66757. Ditto, large, with representation of centipedes. Shó-la wó-pa-no-pa.

66646. Ditto, with representation of the world, sacred terrace or homes of man, and growing plants sheltered by clouds. Ú-lâch-nan, ló-te-po-a-pa á-wi-thlui a-pan ta kwan-haí-a é-tâ-pa.

66843. Ditto, with flower decoration. Ú-te-a wó-pa-no-pa.

66960. Ditto, of red ware, with representation of red cloud. Ló-te-po-a-pa.

66932. Ditto, large, with decoration of scrolls. Thlá-na, ni-tsi-k'ia wó-pa-no-pa.

—— Ditto, small, with flaring rim. Tsá-na sál-athl-k'ia-pan-é.

—— Ditto, with fret like figures of houses. K'iá-kwe-pa-tâi-e.

66871. Ditto, with flower decoration. Ú-te-a wó-pa-no-pa.

68284. Cooking bowl with protuberances. Wó-li-a-k'ia sá-mui a-tsa-na.

68331. Ditto, small. Tsá-na.

68330. Small cooking bowl with representation of intestinal band. Wó-li-a-k'ia sá-tsa-na, k'ól í-tu la-nai-e.

68353. Ditto, with protuberances. Sá-mui-ai-e.

—— Cooking bowl, larger.

—— Bowl for mixture of paint-sizing. Ná-he-lin o-na-k'ia sá-tsa-na.

67173, 67496, 67152. Small terraced bowl for sacred flour used by high priest of the dance. Á-wi-thlui-a-po-na sá-tsa-na, mi-ta-li-k'o pä'-tchi-pa.

—— Cooking bowl with long legs. Wó-li-a-k'ia té-sa-kwi-pa.

—— Ditto, without legs. Sá-tsa-na.

66769. Small eating bowl. Í-to-na-k'ia sá-tsa-na.

66689, 66725. Ditto, flaring. Sál-athl-kia-pan-ne.

—— Small bowl for mixing white paint. K'o-ha hé-lin o-na-k'ia sá-tsa-na.

66623. Eating bowl with representations of sacrificial plumes. Í-to-na-k'ia sá-tsa-na, téthl-na-we wó-pa-no-pa.

66654. Ditto, with representation of house and flowers. K'ia-kwën é-ton nan ú-te a kwaí nai-é.

66928. Ditto, red ware with representation of red cloud in center. Shí-lo-a, ló-shi-lo-a té-po-a-pa.

66613. Small bowl for sacred paint of the dance, ancient. Kâ' i-se-ton-tsa na hé-li-po-kia.

66667, 66661. Larger bowl used for same purpose.

66687. Ditto, very ornate and smaller.
60762. Small eating bowl, with central flower, &c., design. Í-to-na-k'ia sá-tsa-na, ú-te-a wó-pa-no-pa.
66722. Ditto, with world clouds and growing plants represented.
66565. Eating bowl, larger.
66607. Ditto, star and plant design.
66834. Small water bowl. K'iä'-li-k'ia sá-tsa-na.
66830. Ditto, with flaring rim.
66709, 67237, 66717. Ditto, for serving food.
68312, 68315. Small cooking-bowl, with ears. Sá-mui-an tsa-na.
68273, 68320, 68308, 68295. Cooking bowl, larger.
68323, 68337. Ditto, large.
68289, 68310. Ditto, small.
68288. Ditto, large and deep. Té-mui-an-ne.
69872, 68270. Ditto, large.
67304, 67038, 67034, 67036, 67003, 67041, 67046, 66998, 67009. Small shallow drinking bowls of red ware. K'iä'-li-k'ia sá-we á-shi-lo-a.
68367. Small cooking or water heating vessel with corrugated ornamentation about neck. K'iá kiäthl-k'ia-na-k'ia té-tsa-na k'ó-nit u-lap-nai-é.
68282. Small cooking bowl. Wó-li-a-k'ia té-we á-tsa-na.
68262. Ó-lo-i-k'ia-nan, á-wi-thlui-a-po-na sá-tsa-na. "For summer ceremonials, a sacred terraced bowl."
—— Cooking bowl, larger, with addition of frog.
68377. Modern imitation of ancient corrugated ware cooking vessel. Wó-li-a-kia té-ni-tu-li tsa-na.
67176, 67190. Terraced sacred meal basket bowl. K'iá-wai-a wó-pu-k'ia á-wi-thlui-a-po-na sá mu-te-po-a-pa.
67072. Small toy bowl. Í-k'osh-na-k'ia sá-tsa-na.
67060, 66921, 66899, 66897. Small drinking bowls. K'iä'-li-k'ia ta tú-tu-na-k'ia sá-tsa-na-we.
66904. Ditto, with plant decoration.
66925, 68370, 67012, 67018, 6751. Ditto, emblematic flower bird figures. Ú-te-a-wó-tsa-na tsí-na-pa.
66906, 66907, 66892. Small drinking bowls for thin broth. He-k'i tú-tu-na-k'ia sá-tsa-na-we.
66812, 66786, 66877, 66844, 66888. Ditto, for serving food. Í-to-na-k'ia sá-tsa-na-we.
66882, 67004, 66950, 66758, 66744, 66712, 66724, 67260, 66745, 66754, 66763, 66842, 66849–67334–66878, 67299.———Ditto, flower and star decoration.
67186. Ditto, tad-pole decoration.
68307. Bowl for toasting or parching corn-meal, used by children (girls) in learning. Wó-le-k'wi-k'ia sá-tsa-na, a-tsa-na awa yä' 'ni-k'ia.

68316. Small cooking bowl, remarkable for corrugation representing the rising of the boiling waters of a flood. Wó-li-a-k'ia sá-tsa-na, án-u-kwai-k'ia án-te-li-ah-na mú-to-pa.
—— Ditto, plain, very small.
68261. Ditto, with ears. Sá-mui-an-ne.
68318, 68258. Cooking bowl, large.
68279, 68280, 68321, 68317, 68324, 68302, 68286. Ditto, small.
68309, 68298. Ditto, shallow.
69870. Ditto, large.
68257. Ditto, deep.
66895. Small bowl. Sá-tsa-na.
67050. Small flaring bowl. Sá-tsa-na sál-athl-k'ia-pan-ne.
—— Small red bowl. Sá-tsa-na shí-lo-ā.
—— Ditto, with ears. Sá-mui-an tsa-na.

COOKING POTS.

67327, 67333. "Pitcher pot," elaborately decorated. É-mush-ton té-thla-na.
67098. Ditto, small.
66494. Red ware yeast pot, with ancient decoration. Mó-tse-po-k'ia té è-le.
67320. Ditto, with handle.
68296. Small cooking pot. Wo-li-a-k'ia-té-è-le.
68341, 68240. Ditto, for heating water.
68229, 68345. Cooking pots known as the Navajo variety. Pá-te-è-lé.
68354. Ditto, small.
68338, 68342. Ditto, very tall.
68266. Small black ware cooking pot. Wó-le-á-k'ia té-tsa-na.
68228. Ditto.
—— Ditto.
68340. Ditto. Wo-le-a-k'ia-té-tsa-na.
67442. Small cooking pot, ancient form of corrugated ware. Wó-le-a-k'ia té-tsa-na, ní-tu-li-e.
67359. Small ornamented pot. Má-po-k'ia te-we atch-í-pätch-i-pa.
68237. Small cooking pot of black ware. Wó-li-a-kia té-shi-k'iän-na.
67415. Small water pot. Kiä'l-i k'ia té-tsa-na thlúp-tsi-na.
67556. Small pot for sacred medicine paint, containing black pigment. Hé-li-po-k'ia té-tsa-na, hé-liu-wó-po-pa.
68374. Very small cooking pot.
—— Small cooking pot, with corrugated rim. Wó-le-a-k'ia té-muí-an tsa-na.
67417. Small red salt pot, broken at rim. Má-po-k'ia té-tsa-na.
67085. Small pitcher pot for paint sizing. He-li-po-nan k'íäl-i-k'ia, sá-mui-an tsa-na.
68360. Small salt pot. Má-po-k'ia-té-e-le.

68349. Small cooking pot, with protuberances at rim. Wó-li-a-k'ia sá-mui-an tsa-na.
68260. Small cooking pot.
68322. Small cooking pot, with ears. Wó-li-a-k'ia sá-mui-an tsa-na.
—— Small Navajo cooking pot.
67073. Small pot with scalloped rim, for mixing paint. Hé-lin-o-na-kia sá-tsa-na; ní-te-po-a-yä'thl-tâi-e.
68327. Small cooking pot, with ears.
68319. Wide-mouthed cooking pot. Wó-li-a-k'ia tél-ishi-k'iá-pan-an.
66515. Small red salt pot. Má-po-kia té-tsa-na Shí-lo a.
68253. Small cooking pot.
67524. Small paint pot, ancient. Hé-li-po-k'ia té-tsa-na, í-no-to-na.
68299. Small wide-mouthed cooking pot. Wó-li-a-k'ia té-tsa-na.
68249. Small deep cooking pot.
67465. Small pot for heating water, with protuberances, and ornate winding ridges for facilitating handling. K'iá k'iäthl-k'ia na-k'ia té-mu-to-pa tsa-na, nó-li-pa.
68381. Small pot with wide rim, for heating water.
67480. Small pot for heating water, with protuberances, and ornate winding ridges for facilitating handling, or removing to and from the fire. Kiá-k'iäthl-k'ia-na-k'ia té-mu-to-pa tsa-na, nó-li-pa.
68241. Small cooking pot. Wó-li a-k'ia té-tsa-na.
68334. Small cooking pot.
67448. Small toy cooking vessel, with ears. Í-k'ósh-na-k'ia wó-li-a-k'ia sá-mui-an-ne.
67423. Small toy pot for heating water, with ears on either side.
67445. Small earthen pot, new, for cooking and heating water. K'iá-k'iäthl-k'ia-na-k'ia té-mui-a tsa-na.
67455. Ditto.
68369. Ditto.
68358. Cooking pot, large.
68252. Ditto, té-mui-an-ne.
67447. Ditto, very small. Í-k'osh-ná-k'ia té-tsa-na.
67484. Ditto, with decoration of finger prints.
67437. A small toy cooking pot. Í-k'osh-na-k'ia, wó-li-a-k'ia sá-mui-an tsa-na.
67470. Ditto, with protuberances. Mú-to-pa.
67461. Ditto, with rim provided with small knobs. Mu-top ú-lap-nai-e.
68350, 68290. Small cooking pot, with ears; small, ordinary cooking pot.
68263. Small cooking pot. Wó-li-a-k'ia té-tsa-na.
68234. Ditto.
68269. Ditto.
68278. Ditto.
68254. Cooking pot, large.
68255. Ditto, with ears. Té-mui-an-ne.
68347. Ditto.

67483. Ditto, entire body of the vessel is covered with small protuberances to facilitate handling while hot. Wó-li a-a-k'ia té-mu-to-pa.
68357. Large cooking pot used in preparing feasts. Wó-li-a-k'ia-té thla-na.
68235. Small new cooking pot. Wó-li-a-kia té-chi-mo-na.
68336. Ditto, in imitation of a Navajo pot. These Navajo pots are all uniform in shape, with conical bottoms, slender bodies, and rims ornamented with relief or depressed figures. Pá-té-è-le.
68332. Ditto.
—— Ditto.
68346. Ditto.
—— Ditto, with Zuñi figure. Shí-wi-na tsí-nai-e.
68281. Ditto, very small.
68227. Cooking pot of medium size.
68344. Ditto, medium size, long body.
69869. Ditto, small and bowl shaped.
—— Ditto, with ornamentations, symbolic of war. Sä'-mu-k'ia tsí-nan ú-lüp-nai-e.
—— Kettle-shaped cooking pot.
68326. Ditto, small.
—— Ditto, with ears.
—— Ditto, with rope-like band around rim. K'ol-ap kul-nap-nai e.
68379. Ditto, with tripod legs. Té-sa-kwi-pa.
—— Pot with ears. Té mui an-ne.
—— Small cooking pot of corrugated ware. Í-no-to-na ní-tu-li té-tsa-na.
—— Ditto, broken.
—— Ditto, imperfect.
—— Ancient round treasure pot for suspension. I-no-to-na thla wo-pu-k'ia té-pi-li-an tsa-na.
—— Cooking pot of corrugated ware. Wó-li-a-k'ia té-ni-tu-li-a tsa-na.
—— Small water pot for suspension, ancient. Í no-to-na té k'iä-mo-li-an tsa-na.
—— Cooking pot, Navajo variety.
—— Pot, medium size.
—— Small handled vessel for heating water. K'iá k'iäthl-na-k'ia té-mui-an tsa-na.

### DIPPERS, LADLES, AND SPOONS.

67709, 67713, 67722, 67719, 67711, 67735. Small plain earthen eating spoons. Í-to-na-k'ia-sá-sho-k'o tsa-na.
67736, 67733. Ditto, work of children.
67702. Small earthen eating spoons, with representation of male blackbird. Wo-tsa-na-ót si.
67712. Ditto, with female blackbird.

67715. Ditto, with figure of black pig. Pí-tsi-wi-ti-k'win ne.
67718. Ditto, with representation of shrike in center. Shó-k'iä-pïs-si tsí-nai-e.
67705. Ditto, with representation of chaparral cock. Pó-yi-tsín-ai-e.
67710. Small eating spoon, with handles, in representation of human face. Wí-ha í-to-na-k'ia sá-sho-k'on tsa-na.
67570, 67574. Decorated soup ladle of earthenware. Wó-li-k'ia-sá-sho-k'on tsí-na-pa.
67678. Soup ladle, plain.
67691. Ditto, of red ware.
67689. Ditto, very large, with red cloud decoration.
67676. Ditto, very large.
67125. Ditto, cup-shaped, ancient. Í-no-to-na-k'ia sá-sho-k'on muí-ai-e.
67569. Ditto, gourd-shaped, modern.
67680. Ditto, with rattle-handle.
66909. Small bowl made from broken eating ladle.
67224. Very ancient bowl of spoon. Í-no-to-na-k'ia sá-sho-k'on tsa-na.
67716. Small earthen eating spoon. Sá-sho-k'on tsa-na.
67732. Small earthen eating spoon.
67564. Large earthen eating spoon, decorated.. Sá-sho k'on thla-na, tsí-na-pa.
67690. Large earthen spoon for lifting food from a cooking pot. Wó-li-k'ia sá-sho-k'on thla-na.
67683. Small earthen spoon. Sá-sho-k'on tsa-na.
67717. Small eating spoon.
—— Large eating spoon of earthen ware. Í-to-na-k'ia sá-sho-k'on thlá-na.
67731. Ditto, small.
—— Small eating spoon. Í-to-na-k'ia sá-sho-k'on-tsa-na.
—— Ditto.
67734. Eating spoon, of unburned clay. Ák-nam-me, meaning unburned.
67726. Ditto, white glazed earthen ware.
67730. Ditto.
67727. Ditto.
67725. Ditto.
67739. Ditto, small unburnt ware.
67738. Ditto.
67723. Ditto.
67707. Ditto, large. Thlá-na.
—— Ditto, small red ware. Shí-lo-a.
—— Ditto.
67720. Ditto.
67706. Ditto.
67714. Ditto.
67701. Ditto.
—— Ditto.

67703. Ditto, decorated.

67721. Medium sized eating spoon of earthen ware, decorated on the inner side with the figure of a grotesque bird, with long tail-feathers, long bill curving downward, short legs, a scroll figure on its back. Á-sho-na-k'ia hé-lu-k'ia-wó-tsa-na tsín e-tâi-e = ("With the ornamental mud-hen little-bird, marked within the bottom").

67708. Ditto, with the figure of the sacred butterfly drawn on the inner side. Pú-la-k'ia é-tâi-e.

67729. Ditto, white.

67728. Ditto, plain.

67571. Large eating spoon of earthen ware. Í-to-na-k'ia sá-sho-k'on thla-na.

67685. Small earthen ladle, Wó-li-k'ia shó-k'on tsa-na. This specimen is, like many in the collection, made for daily use, and hence without ornamentation.

67566. Small earthen eating ladle, Í-to-na-k'ia sá-sho-k'on thla-na. In this case the Indian name is given in full for the kind of ladle designated, plain ware.

—— Large cooking ladle, of red earthen ware. Wó-li-k'ia sá-sho-k'on thla-na, shí-lo-a.

67770. Cooking ladle, small, plain.

67688. Ditto, small.

67692. Ditto, large.

67684. Ditto, plain, medium size.

67563. Ditto, of red ware.

—— Small basin-shaped ladle, with handle. Á-kwi-k'äish-na-k'ia sá-mui-an k'ia-pan.

—— Small soup-ladle, with primitive serpent design. Wó-tih-k'ia sá-sho-k'on shí-lo-a, í-no-to-na tsí-nan wó-pe.

67572. Ditto, without decoration, of red ware.

67693. Soup ladle, medium size, plain.

—— Large earthenware ladle, decorated in center with picture of night moth. Wó-li-k'ia sá-sho-k'on, pú-la-k'ia é-tâi-e.

67694. Earthen soup ladle. Wó-li k'ia sá-sho-k'on-ne.

67575. Large bowl-shaped red ware soup-ladle. Wó-li-k'ia sá-sho-k'on shí-lo-a.

67567. Large earthen ladle, with hook decoration. Wó-li-k'ia sá-sho-k'on thla-na, ní-tsi-kon ú-le.

67565. Ladle, small, red ware. Tsá-na, shí-lo-a.

67696. Ditto.

67562. Ditto, plain.

67560. Ditto.

67561. Ditto, in imitation of a gourd. Tóm sho-k'on án-te-li-ah-nan-o-na.

67781. Small earthern soup ladle, of red ware. Wó-li-k'ia sá-sho-k'on tsa-na, shí-lo-a.

67698. Soup ladle of white ware.
—— Ditto, white. K'ó-ha-na.
67682. Ditto, red ware.
67573. Ditto, decorated ware.
67686. Ditto.
67695. Ditto, very large, red ware. Thlá-na, shí-lo-a.
67687. Ditto.
67697. Ditto.

CONDIMENT VESSELS.

67389. Salt and pepper jar. Má-pu-k'ia té-è-le.
67356. Salt and pepper dish. Má-pu-k'ia té-wi-pa-tchi-pa.
67402. Plain brown salt pot or earthern box. Má-pu-k'ia-té-è-le.
67088. Small salt cup, with handle. Má-pu-k'ia té-mui-an-ne.
—— Large red earthen salt box or pot. Má-pu-k'ia té-shi-lo-a.
—— Small double salt and pepper earthen vessel, box-shaped, and decorated. Má-pu-k'ia té-thle-lon, tsí-na-pa.
67346. Large double salt and pepper jar. Má-pu-k'ia té-wi-pä-tchin-na.
67364. Decorated salt pot.
67392. Small box-shaped red earthen salt pot. Má-pu-k'ia té-wi-pä-tchin shí-lo-a.
—— Ditto, with figures of elks. Má-pu-k'ia te-e-le, ná-pa-no-pa.
67348. Double salt pot of red ware. Má-pu-k'ia té-wi-pä-tchi-pa shí-lo-ā.
67386. Box-shaped salt and pepper jar, decorated with antelope and deer. Má-pu-k'ia té-è-le, ná-pa no-pa.
67353. Double salt pot of plain white ware. Má-pu-k'ia té-wi-pä-tchin k'ó-ha-na.
—— Box-shaped salt and pepper dish, with representation of bat on one side and deer on the other. Ma-pu-k'ia té-wi-pä-tchin, shá-ho-i-ta, ta top-a-k'ia é-shot-si pä'-tchi-pa.
—— Small salt pot. Má-pu-k'ia té-è-le.
67349. Small plain double salt pot. Má-pu-k'ia té-wi-pä-tchin tsa-na.
67358. Ditto, small and plain.
67352. Ditto, with handle. Mú-to-pa.
67361. Ditto, without handle.
67355. Double salt pot. Má-pu k'ia té-wi-pä-tchin-ne.
67420, 67412. Ditto, broken.
67344. Ditto, large with handle. Thlá-na, mú-te-po-a-pa.
67376. Box salt pot in representation of a house, red ware. Má-pu-k'ia-he-sho-ta-ik-na té-è-le.
67351. Salt and pepper dish. Má-pu-k'ia té-tsa-na.
67395. Salt box of earthen. Má-pu-k'ia té-è-le.
67357. Double salt pot. Ma-pu-k'ia té-wi-pä-tchin-na.
66509, 66510. Pair very ancient yeast jars of whiteware. Mo-tse-ó-pi-k'ia-na-k'ia té-tsa-na á-tchi.

PAINT POTS.

67403. Small connected paint pots. Hé-li-po-k'ia té-tsa-na-we, í-pä-tchi-pa.
—— Small paint pot. Hé-li-pu-k'ia té-tsa-na.
67450. Paint jar. Hé-li-pu-k'ia té-è-le.
67453. Corrugated paint jar. Ní-tu-li hé-li-po-k'ia, té-tsa-na.
67441. Small scalloped rim paint jar. Hé-lï-po-k'ia té-tsa-na pó-tchi-athl-yel-la.
67462. Small paint jar with protuberances. Hé-li-po-k'ia té-tsa-na mú-to-pa.
68435. Small paint jar with protuberances. Hé-li-po-k'ia té-tsa-na mú-to-pa.
66527. Small paint pot. Hé-li-po-k'ia té-tsa-na.
67074. Small paint pot. Hé-li-po-k'ia té-tsa-na.
67365. Small paint bowls, joined. Hé-li-po-k'ia sal-atch í-pa-tchi-pá.
67495. Small paint pot, with sacred terraces and emblems of summer. Hé-li-po-k'ia té-tsa-na á-wi-thlui-a-pá.
67432. Small red ware paint pot, with ears for suspension. Hé-li-po-k'ia-té-tsa-na mui-a pí-k'ia-a-k'ia.
—— Paint jar. Hé-li-po-k'ia té-è-le.
—— Ollas.
67558. Vase, in representation of knit moccasin, used as a toy. Wé-po-tcha té-tsa-na í-k'osh-na-k'ia.
—— Small connected paint pots. Hé-li-po-k'ia té tsa-na í-pä-tchi-pa.
66481. Small paint pot. Hé-li-po-k'ia té-tsa-na má-pa-na-pa.
67520. Small black paint pot. Hé-li-po-k'ia té-tsa-na, k'wín-na.
—— Small suspensory paint pot, used in the decoration of the paraphernalia of the God of War—A-hai-iú-ta—in times of peace. Hé-li-po-k'ia té-tsa-na pí-k'ai-a-pa, Ó-lo-i-k'ia an'-o-na.
—— Paint pot of black ware. Hé-li-po-k'ia té-kwin-na.
67535. Small toy paint pot. Hé-li-po-k'ia té-tsa-na í-k'osh-na-kia.
67413. Small earthen paint box. Hé-li-po-k'ia té-thle-lon-ne.
67533, 67497. Small paint pots. Hé-li-po-k'ia té-tsa-na.
67507. Small broken paint cup, plain. Hé-li-po-k'ia te-tsa-na pó-tcha.
67381. Small pair of connected paint pots. He-li-po-k'ia té-wi-pä-tchin tsa-na.
67522, 67531. Parts of connected paint pots. Hé-li-po-k'ia té-tsa-na í-pä-tchi, pá-tchih-k'ia-no-na.
67394. Small connected pair of paint pots, old. Í-no-to-na hé-li-po-kia-té-wi-pä-tchin tsa-na.
67375. Small connected paint pots. Hé-li-po-k'ia té-wi-pa-tchin.
—— Small earthenware vase for white paint in form of moccasin. He-k'ä-tchu té-we kwin-ne.
—— Plain yellow earthen paint bowl, containing paint-sizing. Ná-hel-é-toñ sá-thlup-tsi-na.

—— Small earthen receptacle for the sizing of colors used in decorating water jars. Té-tsi-na-k'ia hé-lin o-na k'ia te-we, ná-hel-é-ton-na-pa.

67393. Small double paint pot of red ware. Hé-li-po-k'ia té-wi-pä-tchin, shi-lo-a tsá-na.

67400. Small four lobed and handled paint vessel. Hé-li-po-k'ia té-wi-pä-tchi-pa tsa-na, ní-te-po-a, aí-yäthl ton.

67396. Small double paint pot. Hé-li-po-k'ia té-wi-pä-tchin tsa-na.

67477. Small decorated paint pot with spinous protuberances to facilitate handling. Hé-li-po-k'ia té-mui-a-pa.

—— Small ancient paint pot with ears. Í-no-to-na hé-li-po-k'ia-té-mui-an-ne.

68274. Small sizing pot for paint. Ná-hel-e-ton sá-tsa-na.

67387. Small connected paint pots. Hé-li-po-k'ia té-tsa-na, í-pa-tchin-ne.

67372. Primitive earthenware paint box with six compartments, for decoration in sacred dance. Hé-li-po-k'ia té-wi-pä-tchi-we-tsá-na.

67374. Small earthen paint box. Hé-li-po-k'ia té-thle-lon tsa-na.

67463. Small paint pot with spinous protuberances to facilitate handling. Hé-li-po-k'ia té-tsa-na, muí-a-pa.

67366. Small double paint dish. Hé-li-po-k'ia té-wi-pätch-in-ne.

67468, 67466, 67467. Three small paint pots with spinous protuberances to facilitate handling. Hé-li-po-k'ia té-tsa-na-we, á-mui-a-pa.

67416. Small paint jar broken from handle. Hé-li-po-k'ia té-tsa-na.

—— Small paint pot with protuberances representing spines of cactus fruit and made to facilitate handling. Hé-li-po-k'ia té-mu-to-pa, tu-we án-te-li-ah-na yá-nai-e.

67474. Small paint pot with band of protuberances or knobs. Hé-li-po-k'ia té-tsa-na mú-to pi-lan-ú-lap-nai-e.

67529. Small paint pot broken from handle. Hé-li-po-k'ia té-tsa-na.

67424. Small paint pot in form of the native wild gourd. Hé-li-po-k'ia-mó-thlâ-o-na té-tsa-na.

—— Small paint pot of black ware. Hé-li-po-k'ia té-tsa-na-k'wín-ne.

67472. Small plain paint pot with protuberances. Hé-li-po-k'ia té-tsa-na.

67492. Ditto, with sacred terraces represented. Á-wi-thlui-a-po-na.

67559. Ditto, in form of moccasin. Wé-po-tcha.

67510. Small paint pots. Hé-li-po-k'ia té wi-pä tchi k'ia tsa-na.

67384, 67360, 67362, 67368. Small double paint pots. Hé-li-po-k'ia té-wi-pä-tchin tsa-na.

67513, 67499. Small paint jars or pots. Hé-li-po-k'ia té-tsa-na.

67399. Small imitation paint pot, with compartments. Hé-li-po-k'ia án-te-li-ah-na té-wi-pä-tchin tsa-na.

67487. Small terraced paint pots. Hé-li-po-k'ia á-wi-thlui-a-po-na té-tsa-na.

66517. Small paint jar. Hé-li-po-k'ia té-tsa-na.

67429, 67464. Small paint jars, covered with protuberances.
67382. Small paint pot. Hé-li-po-k'ia té-wi-pä-tchin-ne.
—— Paint pot, broken.
67504, 67369, 67371. Ditto, larger, broken.
—— Toy paint pot in form of moccasin. Î-k'osh-na-k'ia wé-kwi-po-tcha-te hé-li-po-k'ia té-tsa-na.
—— Ditto, in form of a pair of moccasins with figures of two parrots. Hé-li-po-k'ia wé-po-tchin-tsa-na, pí-tchi atch poa yä'thl tâi-e.
—— Crude paint jar with four compartments.
67438. Small corrugated paint jar. Hé-li-po-k'ia té-tsa-na.
67489. Small paint jar with terraced ears for suspension. Hé-li-po-k'ia-tél a-wi-thlui-a-pa.
67444. Small scalloped rim paint pot. Hé-li-po-k'ia té-tsa-na pó-tchi-äthl-yel-ai-e.
67406. Small connected paint cups. Hé-li po-k'ia té-tsa-na-we í-pä-tchi-pa.
67515. Small paint cup. Hé-li-po-k'ia té-tsa-na.
67518. Part of double paint pot. Hé-li-po-k'ia té-tsa-na.
67523. Small paint pot showing method of joining. Hé-li-po-k'ia té-tsa na, í-pa-tchi-na-k'ia un'-ah-nai-e.
67500. Small ancient paint pot with ears. Hé-li-po-k'ia té-mui-an, í-no-to-na.
67414. Small paint pot divided into compartments for different pigments. Hé-li-po-k'ia té-tsa-na, hé-te-kwi ú-li-pa.
67457. Small paint jars furnished with protuberances to facilitate handling. Hé-li-po-k'ia té-mui-a-pa tsa-na.
67528. Small paint pot of corrugated ware. Hé-li-po-k'ia ní-tu-li té-tsa na.
67398. Parts of double broken paint pot. Hé-li-po-k'ia té-wi-pä-tchin tsa-na.
67404. Paint pot, with four compartments for the paints of the fire gods. Shú-la-wït-si hé-li-nai-é.
67391. Ditto, double.
66519. Small decorated paint pot of yellow ware. Hé-li-po-k'ia té-tsa-na.
67419, 67428. Ditto, plain red. Shí-lo-a.
67421, 67426. Ditto, with ears. Mú-to-pa.
67498. Small deep paint dish in form of Navajo cooking pot. Hé-li-po-k'ia té-tsa-na, Pá-tel îk-na.
67422, 67481. Ditto, with bear-shaped handle. Áinˢ-shi má-tâi-e.
68368. Ditto, plain with sacred black paint. Há-k'win hé-li-pon-ne.
67521, 67519. Ditto, plain, crude.
66525. Small paint pot of corrugated ware. Î-no-to-na ní-tu-li té-tsa-na.
67451. Paint pot, very small.
67427. Small toy cooking pot. Î-k'osh-na-k'ia wó-li-a-k'ia té-tsana.
67537. Toy cooking pot, very small.

67479, 67443. Small paint pots with protuberances. Hé-li-po-k'ia-té-mui-an-tsa-na.
67503, 67506. Ditto, plain.
67409, 67408, 67379, 67526, 67509. Small plain paint pots. Hé-li-po-k'ia té-tsa-na-we.
68287. Small ancient paint pot. Î-no-to na-hé-li-po-k'ia-té-tsana.
67407. Small four-lobed paint pot with figure of parrot. Hé-li-po-k'ia-té wi-pä-tchin tsa-na, Pí-tchi po-a-yäthl tâi-e.
67478. Ditto, plain.
67495. Ditto, plain, pot shaped, flat bottomed.
67397. Ditto, toy. Î-k'osh-na-k'ia.
67502. Paint pots used in decorating sacred plume sticks, with ears for suspension. Hé-li-po-k'ia té-tsa-na, pí-k'ai-a-pa.
68375, 67508, 67505, 67511. Ditto, in form of small cooking pot.
67501, 67494, 67530, 67512, 67490. Small paint pots. Hé-li-po-k'ia té-we-á-tsa-na.
67388, 67363. Ditto, double.
67525. Ditto, double, broken.
67554. Small paint pot in form of moccasin. He-li-po-k'ia wé-po-tcha té-è le.
67315. Small squash shaped paint pot, ancient. Î-no-to-na hé-li-po-k'ia-té-mu-k'iä-mo-pa.
66478, 66524, 66487, 66488. Small sacred paint pots. Hé-li-po-k'ia té-tsa-na. (Distinguished from ordinary variety by decoration.)
67354, 67350, 67405. Double salt pots. Má-pu-k'ia té-wi-pä-tchin-ne.
67418. Ditto, broken.
67380. Ditto, box shaped.
67377. Salt box, single. Má-pu-k'ia té-thle-lon-ne.
68343. Small water pot for medicine, teas, &c. K'iá-pa-ti-k'ia té-tom-tsa-na.
67473. Small sacred paint vessel with protuberances and decorated with frog figure. Hé-li-po k'ia té-tsa na mú-to-pa, tá-k'ia tsí-na-pa.
67431, 67454. Ditto, ordinary.
67434. Ditto, ancient, from ruins of Tâ'-ia or Las Nutrias.
67756. Ancient vessel of earthenware in representation of frog, for suspension. Î-no-to-na k'iá-me-he-tâ, tá-k'ia an'-te-li-ah-nai-e.

PAINT JARS.

67430. Crude paint jars covered with protuberances to facilitate handling. Hé-li-po-k'ia té-tsana mú-to-pa.
67471. Ditto, small
67436. Ditto, with horse figure l andle.
67390, 67370. Double box shaped paint jars. Hé-li-po-k'ia té-wi-pä-tchin-ne.
67401. Paint jars, with four compartments.

67440. Small corrugated paint bottle. Ní-tu-li hé-li-po-k'ia té-tsa-na.
67552. Milk vase, in representation of knit moccasin. Á-kwi-k'iäsh-na-k'ia wé-kwi po-tcha té-mui-a tsa-na.
67551. Ditto, small, representing buckskin moccasin.
67410, 67402, 67409, 67408. Small crucibles of native manufacture for reducing silver and copper in the manufacture of ornaments. Hé k'ia o-na-k'ia té-tsa-na-we.

EFFIGIES AND FIGURES.

67783. Figure in earthenware of the "Grand Buck Antelope." Má-wo-tsi-thla-na mé-he-tâ.
67775. Figure in earthenware of sitting white bear bearing young. Ain$^{g}$-shĭ-kó-ha-na, mó-to-ok-te í-me chá-se-tâi-e.
67553. Small earthen figure of moccasin, used as a toy. Wé-po-tchi-ne.
67751. Small plain figure of owl, for sacred water. Mú-hu-kwe mé-he-tâ tsa-na.
67763. Ditto.
—— Small earthen figure of barn fowl. Thlá-po-po-k'é-a-mé-he-tâ.
67743. Small figure of an owl. Mú-hu-kwe tsa-na mé-he-tâ.
—— Representation of the totemic chaparrel cock or road-runner. Pó-yi k'win mé-he-tâ tsa-na.
67741. Small figure of an owl. Mú-hu-kwi mé-he-tâ tsa-na.
—— Canteen or vase in form of an owl, for sacred water. Mú-hu-kwe mé-he-ton-ne.
67749. Small, owl-shaped sacred jar.
—— Large doll in representation of the Hé-me-shi-kwe dance. Hé-me-shi-kwe wí-ha.
—— Small, in representation of the black dance or Tchá-kwe-na, wí-ha.
—— Doll in representation of the last Autumn dance.
67740. Figure of decoy for antelope, used in ceremonials. Má-a-we saí-o-sho-kwĭn án-te-li-ah-no-na.
—— Caricature of a Mexican mounted on a buck goat. Tchí-wa-tu-ót si, Tsí-po-lo-a ím-mäthl-tâi-e.
67546. Small figure of owl, ancient. Í-no-to-na mú-hu-kwé mé-he-tâ tsa-na.
67815. Mold for the large cooking pots, made from a bread bowl. Wo-li-a-k'ia te-thla-na á-pa-lin-ne.
67075. Small mold for vase of small cooking vessels. Wó-li-a-k'ia té-tsa-na á-pa-lin-ne.
69317. Small doll made in imitation of the Moqui sacred dance. Á-mu-kwe a-wen wí-ha án te li-ah-nai-e.
67283. Broken Mó-tse-nĭ-k'ia sá-a-le.
67557. Small pair of toy earthen moccasins. Wé-po-tche tsan-atch í-k'osh-na-kia.
66688. Mold for the base of large cooking jars or pots. Wó-li-a-k'ia-téw-a-o-na-k'ia á-pal-lin-ne.

69392. Doll for child, made in representation of the K'iá-thlan-o-na or Great water dancer. K'iá-thlan-o na wí-ha tsa-na.
69395. Small wooden dolls in representation of the sacred dance of "Thlí-tchi-he."
69380. Small toy or doll kilt of the sacred dance known as Sá-la-mo-pi-a or the sacred carrier of the bone rattle. I-k'osh-na-kia Sá-la-mo-pia wí-h'an pí-thlan-tsa-na.
69651. Small sacred kilt for the kâ kâ dance. Kâ-kâ awen pí-thlan tsin-ä'thl-yel-ai-e.
69324. Small doll in representation of the black dance, or Tchá-kwe-na wí-ha.
69323. Doll in representation of the Hé-ma-shi-kwe or last, sacred dance of autumn. Hé-ma-shi-kwe wí-ha.
69674. Large doll in representation of the Hé-me-shi-kwe dance. Hé-me-shi-kwe wí-ha.

## VEGETAL SUBSTANCES.

### EATING SPOONS AND LADLES.

67568. Small wooden eating spoon. Í-to-na-k'ia tám-sho-k'on tsa-na.
68430. Large soup ladle of wood. Wó-li-k'ia tám sho-k'on thla-na.
68439. Large wooden soup ladle. Wó-li-k'ia tám sho-k'on thla-na.
68435. Large wooden ladle. Wó-li-k'ia tám sho-k'on thla-na.
68431. Small wooden soup ladle. Wó-li-k'ia tám sho-k'on tsa-na.
68440, 68433. Large wooden soup ladles. Wó-li-k'ia tám sho-k'o-we.
68447. Large wooden ladle for removing food from the larger cooking-pots. Tám-sho-k'on thla-na.
68438. Large wooden cooking ladle. Wó-li-k'ia tám sho-k'on thla-na.
——– Large ladles of wood. Tám sho-k'o-we.
68443. Ladle of wood. Wó-li-k'ia tám sho-k'on tsa-na.
——— Wooden ladle for removing soup. Wó-li-k'ia tám sho-kon-ne.
68459. Small wooden eating spoon. Í-to-na-k'ia tám sho-k'on tsa-na.
69341. Small wooden eating spoon, ornamented, for identification. Í-to-na-kia tám sho kon tsa-na, án-a-pi-tu-no-na tsí-nai-e.
68453. Wood eating spoon, small. Tám-sho-k'on-ne.
68463. Ditto, gourd. Í-to-na-k'ia shóp sho-kon tsa-na.
68449. Small ladle for eating soup. Í-to na-k'ia tám sho-k'on-ne.
69346. Small ladles used in stirring or dishing out soup. Wó-li-k'ia tám-sho ko á-tsa-na.
69342–43. Soup ladles used in dishing out and stirring cooking food. Wó-li-k'ia tám sho-k'o-we.
69344. Ditto, very large.
69351. Ditto, large.
68444, 69347, 69630, 69629, 68445. Ditto, large.

68429. Ditto, very large.
——— Small wooden eating spoon.
68450. Ditto, without handle.
68458. Wooden eating spoon, very small.
68461. Eating spoon, of horn.
68462. Ditto, of gourd. Shó-po shó-kon-ne.
68428, 68442, 68441. Large wooden ladles. Wó-li-k'ia tám-sho-k'o á-thla-na.
68457, 68460, 68456. Small wooden eating spoons. Í-to-na-k'ia tam' sho-k'o-we tsá-na.
68452, 68451. Ditto, large.

BASKETRY.

68614. Small decorated basket tray for sacred flour of the dance. Thlá-lin tsí-na-pa, k'ia-wai-a wó-li-k'ia.
68472. Small basket bowl for containing sacred flour, ancient. Í-no to-na hâ i-tom k'ia-wai-a wó-pu-k'ia.
68469. Large ancient basket bowl for sacred flour. Í-no-to-na hâ'-in-thla-na k'iá-wai-a wó-pu-kia.
68522. Small basket and pitch canteen for use in traveling. K'o-se tóm-tsa-na.
68506. Large rectangularly woven water basket for use in traveling. K'o-se tóm, shú-k'u-tu-lia.
68538. Small water basket for use in traveling. K'o-se tóm tsa-na.
——— Small basket bottle for carrying water on journeys. K'o-se tóm-tsa-na.

———

68512. Small splint basket bottle for carrying water on journeys. Tchú-ku-to-li-an k'iá-pu-kia k'o-se tóm tsa-na.
68553. Small willow basket for gathering and caging the larvæ of locusts. Pi-la hú-tche-pon tsa-na.
68570. Small willow basket for gathering and caging locusts. Pi-la hú-tche-pon tsa-na, tchú-mal úp-tchu na-kia.
68466. Small burden basket for carrying fruit. Mó-pu-k'ia hú-tche-pon tsa-na.
68568. Small willow basket for gathering and caging locusts. Tchú-mal úp-tchu na-kia.
68605. Small basket for parched corn. K'o-se tsí-tsa-na á-le-kwi wó-pu-k'ia.
68545. Small willow basket for gathering and caging locusts. Pi-la-hú-tche-pon-tsa na, tchú-mal-up'-tchu-na-k'ia.
68598. Small willow toasting basket. Pi-la tsí-tche-pon-tsa-na, á-le-kwi-k'ia-na-k'ia.
68576. Small white-strand basket for locust gathering. Há-k'o-ha hú-tche-pon tsa na, tchú-mal úp-tchu-na-k'ia.

68556. Small willow basket for gathering locusts. Pi-la hú-tche-pon tsa-na, tchú-mal úp-tchu-na-k'ia.

68489. Small basket jar for containing sacred flour, ancient. Í-no-to-na hâ-i-tóm, k'iá-wai-a wó-pu-k'ia.

68577. Small white strand basket for gathering locusts. Há-k'o-ha hú-tche-pon-tsa-na, tchú-mal úp-tchu-na-k'ia.

68549. Small basket for gathering locusts. K'o-se hú-tche-pon-tsa-na, tchú-mal úp-tchu-na-kia.

68468. Large burden basket for carrying peaches. Hú-tche-pon thla-na, mó-tchi-kwa wó-pu-k'ia.

68503. Small round basket for medicine flour. Hâ-i-tóm, k'iá wai-a wó-pu-kia.

68554. Small round basket for gathering locusts. K'o-se hú-tche-pon, tchú-mal up'-tchu-na-k'ia.

68487. Small round flour basket. Hâ-in tsa-na, ó-e wó-li-k'ia.

68484. Small round basket of splints for sacred flour. Hâ-i tóm shu-k'ish-pa, k'iá-wai-a wó-pu-k'ia.

68558. Small willow basket for gathering locusts. Pi-la hú-tche-pon-tsa-na tchú-mal úp-tchu-na-k'ia.

68552,68584. Small willow baskets for gathering locusts. Hú-tche-po-tsan-na, atch tchú-mal úp-tchu-na-k'ia.

68572. Large cage baskets for gathering and confining the pupæ of locusts. Tchú-mal úp-tchu-na-k'ia hú-tche-pa thla-na.

68555. Small willow cage basket for the pupæ of locusts. Tchú-mal úp-tchu-na-k'ia hú-tche-pon tsa-na.

68464. Small peach pannier. Mó-tchi-kwa mó-pu-kia hú-tche-pon thla-na.

68582. Small loosely woven basket for gathering and confining pupæ of the locust. Hú-tche-pon tsa-na, tchú-mal-úp-tchu-na-k'ia.

68561, 68560. Small loosely plaited willow baskets for gathering locusts. Pi-la hú-tche-pon tsa-na, tchú-mal úp-tchu-na-kia.

68551. Small loosely plaited willow basket for gathering locusts. Pi-la hú-tche-pon tsa-na.

68586. Small loosely plaited basket of furze strands. Há-k'o-ha tchu-mal úp-tchu-na-kia hú-tche-pon-tsa-na.

68580. Small loosely-plaited baskets of furze strands for gathering locusts. Há-k'o-ha hú-tche-pon tsa-na, tchú-mal úp-tchu-na-k'ia.

68567. Small loosely plaited basket of willow for gathering locusts. Pi-la hú-tche-pon tsa-na, tchú-mal úp-tchu-na-k'ia.

—— Large-sized white herb basket for gathering and confining locusts. Tchú-mal úp-tchu-na-kia hú-tche-pon-ne.

68488. An ancient vessel-shaped spiral basket for sacred meal and treasures. K'iá-wai-a ta thlâ-wó-pu-k'ia hâ-i tóm.

68573. Large-sized basket for gathering and confining locusts. Tchú-mal úp-tchu-na-k'ia há-k'o-ha hú-tche-pon-ne.

—— Small ancient basket vase for sacred flour. K'iá-wai-a wó-pu-k'ia hâ-i tóm.

68474. Small ancient sacred-flour basket. Í-no-te-kwe a-wa hâ-i-tóm, k'iá-wai-a wó-pu-kia.

68592. Small willow basket tray. Pi-la tsí-tsa-na.

68593. Small decorated basket tray for sacred flour of the dance. Thla-lin tsí-na-pa, k'iá-wai-a wó-li-k'ia.

68593. Small loosely plated basket tray. Tsím-tsa-na.

68634. Large basket tray of marsh grass for washing corn. Tchú-k'o-sha-na-k'ia tsí-shu-k'wi-tsí-thla-na.

68600. Small basket-bowl sieve for parching or toasting corn or piñons. Pi-la tsí-che-pon tsa-na, á-le-k'wi-k'ia.

68609. Small basket sieve for sifting ashes from toasted corn. Á-le-k'wi-k'ia tsí-tche-pon tsa-na.

68610. Small basket sieve for toasting or parching corn. K'o-se tsí tsa-na.

68594. Small basket sieve for parching corn or piñons. Pi-la tsí-tsa-na, á-le-k'wi wó-lu-kia.

68611. Small basket tray for sifting parched corn, made of willow ware. Pi-la-á-le-k'wi-k'ia tsí-tche-pon-ne.

68606, 68589, 68596. Small basket trays of willow work for parching corn, &c. A-le-k'wi-k'ia tsí-tche-pon-ne.

68467. Small burden basket, mostly used for carrying fruit. Hú-tche-pon tsa-na.

68588. Small basket for toasted corn or piñons. Tsí-tsa-na.

68562. Small basket cage for gathering locusts. Tsi-tche-pon tsa-na, tchú-mal úp-tchu-na-kia.

68566. Large loosely woven basket for gathering the larvæ of locusts. Tchú-mal úp-tchu-na k'ia hú-tche-pon tsa-na.

68557. Small loosely woven round basket for gathering and caging the larvæ of locusts.

68579. Small loosely woven round basket for gathering and caging the larvæ of young locusts. Hú-tche-pon k'iä'-mo-li-a tchú-mal úp-tchu-na-k'ia.

68548. Small round basket of white strands. Há-k'o-ha hú-tche-pon tsa-na.

68604. White branch or strand basket. Há-k'o-ha tsí-f-le.

68612. Small willow basket for children. Pi-la tsí-tsa-na.

68485. Small ancient basket for medicine. A-k'wa wó-pu-k'ia hâ-i tóm-me, shú-k'o-to-lia.

68481. Small treasure basket in form of water vessel. Hâ i-tom' tsa-na-thlâ-wó-pu-kia.

68477. Small vessel-shaped treasure basket. Thlâ wó-pu-k'ia k'o-se tóm.

68493. Small basket bottle for carrying water during journeys. K'o-se-tóm, tchú-k'o-to-li-a.

68533. Small basket bottle for carrying water during journeys. K'iá-pu-k'ia k'o-se-tóm.

68519. Small water bottle of basket work and pitch. K'iá-pu-k'ia k'o-se-tóm.

68480. Small water bottle. K'o-se tóm, tchú-k'o-to-li a.

68521. Large wicker and pitch water bottle. K'o-se tóm thla-na k'iá-pu-k'ia.

68509. Small water bottle of wicker work. Hú-tche-pon tsa-na, tchú-k'o-to-li-a.

68537. Small basket water bottle. K'o-se tóm tsa-na, k'iá-pu-kia.

68529. Small wicker and pitch water bottle. K'o-se tóm tchu-k'o-to-liâ.

68510. Small water bottle with open neck. K'o-se tom shú-k'ish-pa.

68532. Large water bottle of wicker work and pitch for carrying water. K'o-se-tóm thla-na, k'iá-pu-kia.

68497. Water bottle of wicker work and pitch. K'o-se tóm-me.

68507. Large wicker work water vessel for use in traveling. K'iá-pu-k'ia k'o-se tom' thla-na.

68515. Small wicker water vessel. K'o-se tóm-tsa-na.

68542. Small double lobed and necked water vessel of wicker work. K'o-se tóm wi-k'ithl-to-na.

68530. Small wicker work water vessel. K'iá-pu-kia ko-se tóm tsa-na.

68508. Small water vessel of wicker work. K'o-se tóm tsa-na.

68211. Gourd jar for water in the fields. Sho-po mé-wi k'i-lik-ton-ne.

—— Small drinking dipper of gourd. Tu-tu-na-k'ia mó sho-k'on-tsa-na.

—— Large basket canteen for traveling. K'o-se tóm thla-na.

68492. Basket canteen for traveling. K'o-se tom, ú-pi-'thlan í-kwi e.

68516. Small basket-work canteen for traveling. K'o-se tóm tsa-na, k'iä'-pu-kia.

68531, 68497. Small basket and pitch canteens for use in traveling. K'o-se tóm-ma á-tsa-na, k'iá-pu-kia.

68543. Small double canteen with contraction at middle to facilitate suspension. K'o-se tóm i-k'i-lik-to-pa-k'ia, k'iá-pu-k'ia.

68490, 68518, 68514, 68491, 68500, 68495, 68499, 68524, 68536, 68498. Series of ten basket bottles for use in traveling, made waterproof by coating of pitch. K'iá-pu-k'ia k'o-se tóm-a-we.

68501, 68502, 68483. Basket bottles, round and short necked.

68478, 68517, 68513, 68527, 68526, 68511, 68529. Ditto, bottle shaped.

68540, 68535, 68541, 68534. Ditto, double bodied or lobed. K'o-se tom-me í-k'ithl-tâ pa.

68595. Small basket for parching corn. Á le-k'wi-k'ia tsí-tsa-na.

68625. Small sacred coiled basket. (Moqui.) Á-mu-kwe a-wen ní-tu-li thlá-lin-ne.

68647. Small basket, for washing corn. Tchú k'o-sho-na-k'ia hó-tsi-í-le.

68482. Small basket for securing young locusts, with twig loop for suspension. Tchu-mal úp-tchu-na-k'ia hú-tche-pon, pí-k'iai-ai-e.

68571. 68565, 68581, 68544, 68583, 68578, 68574, 68559, 68587, 68590, 68569, 68563, 68547, 68575, 68585, 68564. Ditto, gradually diminishing in size in the order given.

68615. Small basket cup with handle. Á-le-k'wi-k'ia tsí-tche-pon tsan-na.

68599, 68602, 68601. Small basket trays. Há-k'o-ha tsí tsa-na á-tchi.

68623. Small toy meal bowl of water-tight basket work. Hó-in tsa-na.

68486. Ditto, long, flat-bottomed, for sacred seed. Tâ-shon wó-pu-k'ia hâ-i tóm-me.

68471, 68473, 68475. Large, urn-shaped bowl of water-tight basket work, for sacred meal. K'ia-wai-a wó-pu-kia.

69390. Native wooden stool. Thlém-pia-an-ne.

68504, 68505. Very primitive small-mouthed treasure jars. Thlâ wó-pu-k'ia té-tsana á-tchi.

68494. Ditto, of red willow ware.

68651. Corn-meal sieve of amole. Hâ'-tsi-pi-kwai-k'ia.

### LOOM IMPLEMENTS.

69692–69704. Large hard-wood slats for pounding down the warp in the manufacture of serapes or blankets. Shó-tche-wo-na-k'ia thlé-we.

69731–33. Ditto, used in the manufacture of women's blankets. É-he wo-na-k'ia thlé-we.

69734–35. Ditto, for finishing. K'wan ái-ya a-k'ia-na-k'ia thlé-tsa-na-we.

69471–74. Frames of looms for stringing the woof for weaving belts and garters. Thlá-k'ia-pa-we.

69663–71. Knife-shaped hard-wood sticks for pounding down the warp in the manufacture of garters and belts. É-ni wo-na-k'ia-thlé-we.

69808. Frame for setting up the warp of small figured blankets. Pí-sal o-na-k'ia pí-ti-k'ia thlé-we.

69804. Ditto, larger.

69787. Poles or sticks on which the warp is supported in the weaving of large serapes; also a brace. Shó-tche won-na-k'ia ó-yäl-a-we.

69752–58. Appurtenances to a loom, consisting of threading sticks (1), woof beaters (2), comb for straightening thread (3), and braces for warp (4). Thlé-tsa-na pó-an ne, (1) Shó-pi-to-k'ia, (2) Thlém-me, (3) Ó-'na-pa-ne, (4) Thlá-k'win-ne.

69676–91. Slats or hard-wood woof beaters. Thlé-we.

69738–51. Small woof beaters for finishing blankets and serapes. Shotche yá-k'ia-na-k'ia, thlé-tsa-na-we.

69770–79. Braces for the warp of small serapes and blankets. Á-thla-k'wi-po-a-we (*sing.*, thlá-kwin-ne).

69759–68. Ditto.

69780–86. Ditto, larger, for serapes.

69821–32. Small sticks for separating the warp of small blankets. (Thlé-tsa-na.) Thlé-tsa-na pó-a-we.

69469, 69410, 69411, 69396–97, 69399, 69402. Small combs for straightening the warp in weaving. Pí-li-li-na-k'ia ó-na-pa, pó-a-we.

69814–20. End sticks for supporting warp in manufacture of small blankets and shirts. U-tchun o-na-kia ó-yäl-la-we.

69797–69803. Portions of loom used in weaving blankets. Á-thla-kwi po-an-ne.

69833–42. Sticks used in supporting the warp in the weaving of serapes. Shó-pi-to-k'ia thlá-pó-a-we.

69790–96. Ditto, with other portions of loom.

69705–29. Knife shaped woof beaters used in the manufacture of belts and garters. É-ni wo-na-kia thlé-we.

69653–61. (No. 1.) Rollers or sticks on which the belt is rolled during the process of weaving. É-ni-wo-na-kia ó-yal-lu-na-we. (No. 2.) Frames for the stringing of the warp of belts, &c. Thlé k'ia-pa-we.

—— Small stick used in separating or confining the warp of belts. É-ni wo-na-k'ia shó-pi to-k'ia thlém tsa-na.

### IMPLEMENTS OF WAR AND THE CHASE.

69455–66. Small rabbit clubs or boomerangs. Ók-shĭk thlá-ta-kia thlé-a-we.

69603. Ditto, showing lightning grooves. Ók-shĭk thlá-ta-k'ia thlé anne, sho we á-he-a-kwa-pa wi-lo-lo-a á-tsi-na-pa.

69535–49. Bows, plain and sinew-backed, one (small) used as a toy, with some arrows. Pi-thla-we thlí-pa-na, sho-we í-hi-k'ia-(Small) í k'osh-na-k'ia pí'-tsa-na.

69493, 69497–69514, 69476–92, 69494–96, 69435–54. Rabbit sticks or boomerangs (large variety). Pó-k'ia thla-ta-k'ia thlé-a-we.

69516–34, 69632–50. Wooden war clubs of the order of warriors, or priesthood of the bow. Á-pi-thlan-Shí-wa-ni a-wan tam' k'iap-na-we.

69595, 69596–69600. Small toy bows and arrows, with baskets attached, customarily presented by the sacred dancers to little boys. A-tsa-na a-wen Kâ kâ pí-thla-we, ta shó-we. Hú-tchep pí. k'ia-ai-e.

69551–67. Ditto, more ornate.

69573–94. Bows for hunting. Thlá-ta-k'ia pí-thla-we.

69602. Arrows pointed with iron (twelve specimens). Sho-we á-he-kwi-pa.

69601. Ditto, unpointed.

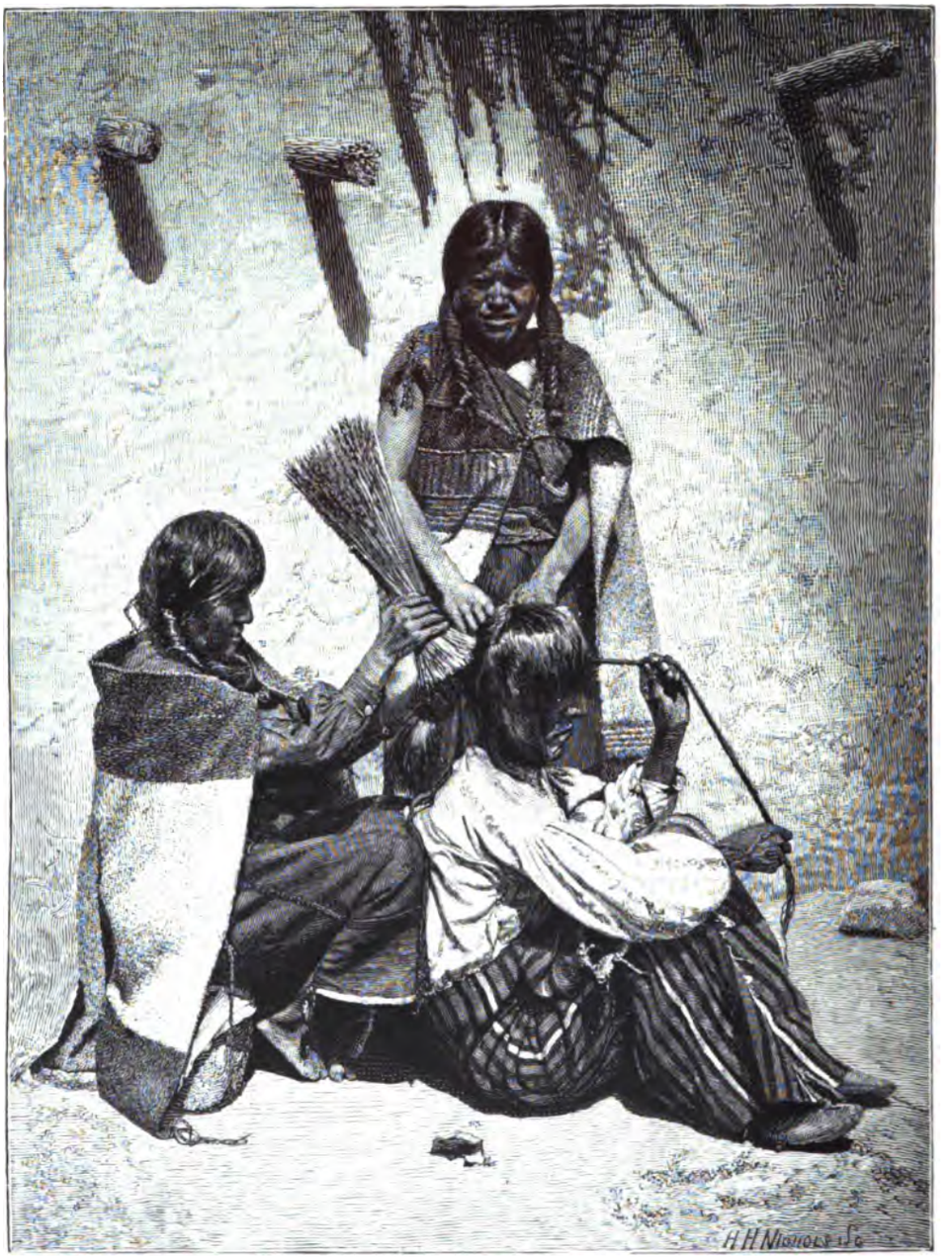
### GAMBLING IMPLEMENTS.

69268. Tubes and ball for the sacred game of the hidden ball. Í k'osh-na-k'ia í-an-k'o-lo-k'ia tó-ma-we. Ú-lin-ne.

69340. Wooden cards for betting game. Í-to-sa-na-k'ia tá-sho-we.

DRILLING TURQUOISES.

DRILLING TURQUOISES.



MOKI METHOD OF DRESSING THE HAIR.

69672. Curved cross-piece for top of ladder. Thlé-tsi-lon an thlém-pethl-tou-ne.

69350. Combing broom, or broom and comb combined, composed of fine grass, bound in the center; the butt end being used for combing, the top end as a brush or broom. It is also used as a strainer. Í-pïsh-na-k'ia pé-pe. See pl. xliii.

69604. Bunch of mush sticks, used in stirring mush or corn while parching. Wó-le-kwi-k'ia thlá-pa-po-an-ne.

69308–09. Twisters used in the manufacture of hair *riatas* or ropes. Tsí-to-ni-wo-na-k'ia wí-tsi-nan-ne (á-tchi).

69289. Canes used in the sacred game of Shó-li-ne, played during winter and early spring. Shó-li po-an-ne.

69424. Pegs used in stretching skins. K'é-pi-li-li-a-k'ia thlá-po-an ne.

69430. Vermin-killers, or louse-traps. Mé-'thla-ta-k'ia thlä-ton ne.

69431. Ditto.

69274. Sticks kicked in the race of Tí-kwa-we. Tí-kwa thla-we.

69275. Ditto.

69812. Frames for setting up the warp of serapes. Pí-ti-k'ia thlé-we.

69675. Lance of iron used in the wars of the past. Í-thlak-na-kia lan-sa.

69235, 69232, 69233, 69236, 69239, 69243, 69246, 69294, 69292, 69295, 69247–48–49–50. Spindles used in spinning and twisting wool and fiber. Thlíp-na-k'ia thlát-to-we. With smoothing cob attached.

69251, 69252, 69257, 69290. Bow drills for manufacture of shell and turquoise ornaments. Á-'a-na-k'ia thlá-to-we.

—— Small dice-sticks used in a game of the basket tray. Thláthl pa-tsa-we.

69339. Boards or blocks used in confining the hair of women in sacred dances, as a mark of virginity. Má-tsi-k'wa-k'ia thlé-we.

69279. Ditto.

69280. Ditto.

69321. Small pair of symbolical tablets carried in the hand during dance of the priests of the tablet dancers. Thlá-he-kwe a-wa thlé-we.

69406. Slats on which the hair is bunched, to indicate virginity of women in sacred dance of the flute. Ma-tsi-k'wa-k'ia thlé-we.

69321. Small pair of symbolic tablets carried in the hand during the dance of the Priestess of the Tablet dancers. Thlá he-kwe a-wa thlé-we.

69375. Small ceremonial war club of the order of the Priesthood of the Bow. Á-pi-thlan-Shi-wa ni a-wa tam k'iap-nan-ne.

69014. Toy cradle board for doll. Wi-ha yä'thl-to-k'ia thlém-me.

69391. Ditto.

—— Ditto.

69405. Frame of wood for pommel of saddle. Á-wo-kon o-na-k'ia tám-me.

69312. Sacred warbling flute. Tchá-he-he-lon-ne.

69467. Sacred flute. Shoh-k'on-ne.

—— Peg for suspending. Tám-kwai-nan-ne.

—— Very large pegs used in the (sacred) running game of the two war gods. Tí-kwa-we, Á-hai-iu-ta á-tchi-a.

—— Small sacred wand of the god of fire. Kâ-kâ-shu-le-wi-tsï an téthl-nan-ne.

—— Small darts used by children.

—— Wooden buzz and pivot. Thlé mo-la-ton-ne.

—— Drinking gourd. Tú-tu-na-kia shó-pon-ne.

—— Wooden buzzers used as a warning by war Priests, members of sacred orders, in procession of Gods or sacred Medicine relics. Thlém-tu-nu-nun-ne.

69423 (eleven specimens). Wooden whizzers used in ceremonials or sacred dances as warnings for the observances of certain forms. Thlé-tu-nu-nu-we (sing., thlem-tu-nu-nun-ne).

69426–27. Fire sticks used in kindling the sacred New Year fire. Má-k'e wo-na-kia á-su-su-k'ia-na-k'ia.

69374. Gourd-handle boxes used in carrying the sacred tobacco at the councils or meetings. Á-na-te wo-po-k'ia tóm a we.

69348. Ditto, smaller.

69425. Wooden rope-twister without handle, used mostly in the manufacture of hair riatas. Wí-tsi-tsi-nan-ne.

69315. Small symbolical tablet carried by the priests of the flute dance. Shoh-ko Mó-son-ne an thlém.

69273. A cane used in the national game of the god of war during winter and early spring. Shó-li-we. Sticks kicked in the national sacred race of Tí-kwa-we.

—— Indented ring for supporting for eating-bowls on the head, of Spanish bayonet. Wó-thlak-to-k'ia ha-k'in k'í-withl-to-pa.

68629, 68628, 68627, 6828, 68632, 68629, 6828, 68629, 68633, 68629. Pads or rings of Spanish bayonet for supporting round-bottomed vessels on the head. Wó-thlak-to-k'ia hó-ha-k'i-we.

68630 (six specimens), 68631 (five specimens). Rings of Spanish bayonet for supporting round-bottomed vessels on the head. Wó-thlak-to-kia há-ki-we.

68626. Pad or ring of Spanish bayonet for supporting round bodies on the head. Wó thlak-to-k'ia há-k'in-ne.

—— Rings of Spanish bayonet for supporting round-bottomed vessels on the head. Wó thlak-to k'ia há-k'i-we.

69605–21. Planting prods or spuds for planting corn and melons. Tchú-tâi-na-k'ia tá-sa-kwi-we.

69673. Patu or digging-stick. Tsém-me.

69418. Wooden hook for wood burdens. Ták-na-k'ia tám-tsi-k'on-ne.

69365–72. Hooks or crotches used in securing burdens. K'ia-ha-tche-po-an-ne.

—— Curved pine boxes for sacred plumes. Lá-po-k'ia thlé-lo-we.—"Sacred council boxes."

—— Ditto, round bottomed. Lá-po-kia thlé-lon kiä'-mo-lin.

69382–89. Long square plume boxes of pine. Lá-po-k'ia thlé-lon-ne.

69270. Wooden tubes (1), ball (2), and straw counters (3) used in the ancient game of the Gods of War. 1. Í-än-k'o-lo-k'ia tóm-a-we. 2. Ú-lin-ne. 3. Tí-we.

69296. Curious wooden slat dance appurtenance made to represent lightning and its motions. Wí-lo-lo-a-nan an-te-li-ash-nan-ai-e.

69255, 69470. Wooden spindle whorls and cord-stretchers of cob. Thla-ton, ta thlun-pí-tsa-thli-k'ia, also whorls used by many of the Eastern Pueblos in drilling torquois and shell ornaments.

69412, 69413, 69414, 69415, 69416. Small tops. Mo-lä-to-we á-tsa-na.

69409. Wooden stirrups. Tá i-te-tchu-na-we.

69662. Small knife-shaped stick for pounding down the woof of belts. É-ni-wo-na-k'ia thlem-me.

69434. Small louse smashers or traps of flat slats (three specimens). Me-we á-k'u-tsu-a-k'ia-na-k'ia thlép-ton-ne.

69433. Small louse crusher of wooden slats. Í-meh-k'wïsh-na-k'ia-thlép-ton-ne.

69422. Small whizzer used in sacred and medicine dances. Thlém-tu-nu-nun-tsa-na.

69314. Ditto, decorated with lightning.

69417, 69419, 69420, 69421. Hooks and eyes of wood for securing burdens. Mä-to-k'ia tá-tsi-k'o-we.

69301, 69310. Small wooden figures of birds for decoration of altars. Wo-tsa-na-tesh-kwin po-ai-yäthl-to-k'ia.

69311. Ditto, of dove.

69475. Small loom for weaving belts. Thlá-k'ia-pan-ne.

69401, 69402, 69403, 69404, 69398. Wooden combs for straightening warp of blanket in weaving. Tam ó-na-we.

69276. Small pegs used in (the sacred) running game of the two War Gods. Á-hai-iu-ta á-tchi-nai-a tí-kwa-we.

69305, 69428, 69306. Wands of the bearers of the wand or sacred arrow. Thle-we-kwe a-wen í-k'withl-tchu-na-k'ia shó-we.

69355, 69284, 69352. Sticks used in the game of tá-sho-li-we.

69152. Elaborate head-dress of the women used in the dance of the tablets. Thla-he-kwe awan thlethl-pó-yau-ne. Star, moon, and ladder to the skies represented.

69276. Ditto, sun and star represented.

69318. Sacred tablet of the bearers of the wand fastened to a spatula which is forced down the throat of members during public ceremonials. Thlé-we-kwe a-wen thlé-wi-k'withl-tchu-na-k'ia-thlem, yä-tchun, mó-yä-tchun, ta-yá-o-non pä'-tchi-pa.

69320. The great star (of wood) of the sacred altar of the Lesser Spark Order. Má-k'e-tsá-na-kwe a-wen mó-yä-tchun-thla-na tésh-kwin-pi-k'ai-a-yä'thl-to-k'ia.

69850, 69849, 69848. Sticks used in lighting cigarettes in Council. Po-ne mák-tchu-k'ia thlá-kwi-mo-we.

69349. Gourd for sacred (native) tobacco used at ceremonials of secret orders. A-na-te wó pu-k'ia sho-po tóm-tsa na.

ANIMAL SUBSTANCES.

69335, 69334, 69333, 69336, 69332. Small bow guards of leather ornamented with plates of tin. Kém-pas-si-kwin hé-lo-pa-na.

69393, 69299. Horn arrow straighteners. Shó mo-thla-k'ia-na-k'ia sái-a-we.

69400. Belt of hair and green rawhide used in the costume of the order of cactus. Kâ-shi-kwe a-wen kém-i-k'win ú-pi-thlai-e.

69304. Rawhide head band and horn used in the dance of the feast of dead enemies or *Ó-i-na-he.* Ó-i-na-he a-wa kém-othl-pan, sái-a-i-e.

69307. Small darts used by children in a game of the War God, made of feathers and cobs. Lá-po-tchi-we.

6379. Deer-horn prod for use in basket weaving. Tsí o-na k'ia saí-an-ne.

69302. Horns used in sacred dance of blue horn. Kâ'-kâ-thli-an an saí-a-we.

69337. Pair of heel-bands used by women in the dance of fallen enemies, etc. (two specimens). Wé-thle-a-kwi-we.

69266. Deer hoof rattles attached to sacred turtle shell. Thlé-a-kwi an ná-k'u-tchi-we.

69381. Eagle feathers from shield. K'iä-k'iäl lá-ai-yäl-la-k'ia lá-we.

69267. Tortoise shell used in sacred dance. Kâ-kâ a-wen thlé-a-kwi-we.

69376, 69377, 69378. Bone awls used in weaving. Pí-ti sí-wi-k'ia-na-k'ia sam' si-mi-we.

Miscellaneous objects not numbered in Collector's Catalogue.

—— Three bow guards for children. Kém pas si-kwi-we.

—— Two small rattles for children. A-tsa na a-wen tchí-mo-we.

—— Three awls used in weaving blankets and baskets. Sá-si-mi-we.

—— Four sets of small flat sticks used in the game of Tá-sho-li-we.

—— The blue horn used in the head-dress of the women of the horn-dance. Sá-te-tchi Ó-k'ia an saí-an-ne.

69303. Burden-strap for forehead. Yä'thl-ton-ne.

69297. Arrow straighteners of mountain-goat horn. Shó tsathl-tchu-na-ki'a saí-an-ne.

69652. Embroidered sash used in sacred dances. Tá-k'un í-kwin, Kâ-kâ á-wen.

69298. Horn arrow straightener. Shó tsathl-tchu-na-k'ia saí-an-ne.

69407. Paddle-shaped ornament used in the head-dress of the women during the dance of the Sá-te-tchi.

## COLLECTIONS FROM WOLPI, ARIZONA.

### ARTICLES OF STONE.

69876–69950. Flat rubbing-stones used for grinding grain on metates.
69951–69971. Metates.
69972–69975. Stone slabs for baking bread.
69976–70063. Stone mortars for grinding paint, chili, etc.
70064. Two fragments of stone mortars.
70065. Metate and two fragments of stone rubbers.
70066. Grinding-stone and muller.
70067–70078. Stone mullers.
70079–70155. Stones used for rubbing, smoothing, and polishing.
70156–70164. Grooved stones used for smoothing and polishing arrows.
70165–70175. Stones used for pounding, hammering, &c.
70176–70313. Stone axes and hammers, mostly of basalt.
70314–70435. Stone hammers and mauls, mostly of coarse ferruginous sandstone.
70436–70475. Stone pestles.
70476–70500. Stones used for grinding paint, chili, pepper, etc
70501–70508. Hammer-stones, etc.
70509. } Stone axes with handles.
70510. }
70511–70524. Images carved in sandstone.
71037. Fifteen rubbing or smoothing stones for pottery.
71038. Four rubbing stones.
71039. Stone scraper.
71041. A lot of flakes of obsidian, flint, etc.

### ARTICLES OF CLAY.

70525. An imperforate earthen pipe.
70526–45. Water vases or tinajas with various styles of ornamentation.
70546–50. Toy water vases or tinajas.
70551–601. White ware bowls of various sizes and styles of ornamentation.
70602–618. Red ware bowls, variously ornamented.
70619. A paint cup.
70620–23. Coorse toy cups.
70624–31. Small and medium sized water vases. 70628–9, are without ornamentation.
70632–46. Earthenware cups with handles and variously ornamented.
70647–50. Small basket-shaped vessels.

70651–8. Square and oblong dishes, ornamented.
70659–75. Ollas or cooking vessels of various sizes.
70676–95. Medium and large sized ollas or cooking vessels.
70696–98. Toy cooking vessels.
70699–700. Basket-shaped vessels.
70701–39. Canteens without ornament, large size.
70740–44. Canteens, ornamented.
70745–51. Small plain canteens.
70752–56. Calabash or double gourd-shaped water-vessels, some plain and others ornamented.
70757–70789. Large ollas.
70790–70802. Pans, cups and dishes.
70803–882. Ladles of various shapes, sizes and styles of ornamentation.
70883–87. Curiously shaped and ornamented paint boxes.
70892–901. Salt and pepper boxes.
70902–9. Vessels in the shape of birds with the opening in the top of the head or in the back.
70910. Moccasin shaped vessel.
70911–25. Images of the human figure.
70926–7. Images of an animal, very rude.
71040. Earthenware pipe.

## VEGETAL SUBSTANCES.

### BASKETRY.

70928–36. Large deep baskets, for carrying loads.
70937. Small deep baskets.
70938–40. Large, oblong, shallow tray baskets.
70941–47. Small, circular, flat basket trays.
70948–50. Circular round-bottomed baskets.
70951–55. Circular flat basket trays, woven in colors.
70956. Wicker-work cradle.
70957–8. Toy cradles.
70959–61. Basket work head guards for cradles.
70962–6. Basket work head pads.
70967–73. Small deep baskets.
70974. Small dipper-shaped basket, with handle.
70975. Head-dress, with horns, used in dances.
70976–82. Shallow circular baskets.
70983–87. Small square baskets, somewhat smaller at the top than at the bottom.
70988–96. Small circular baskets deep, and smaller at the top than at the bottom.

70997. Small circular basket tray.
70998. Hat of plaited straw.
70999. Sock or moccasin of straw.
71000. Ball for a game.
71001–4. Medium-sized circular basket trays.
71005–8. Smaller-sized circular basket trays.
71009–12. Still smaller-sized circular basket trays.
71013–4. Deep circular baskets, much smaller at the mouth than at the bottom.
71015–8. Small deep circular baskets with handles reaching from side to side.
71019–22. Small saucer-shaped water-tight baskets.
71023–28. Jug and gourd-shaped water-tight baskets.
71029–30. Small circular deep baskets.

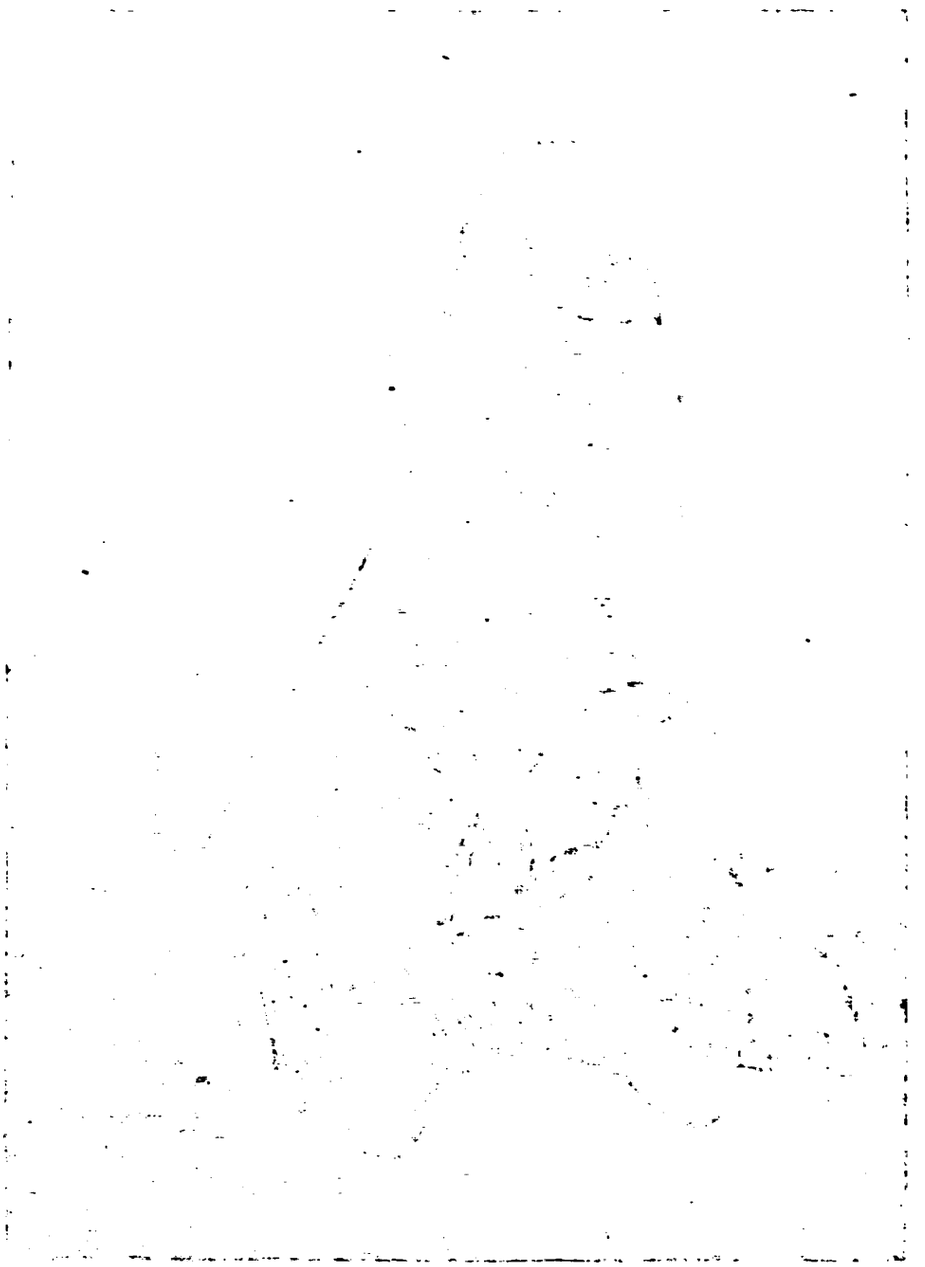
GOURDS, BOWS, ARROWS, RATTLES, &c.

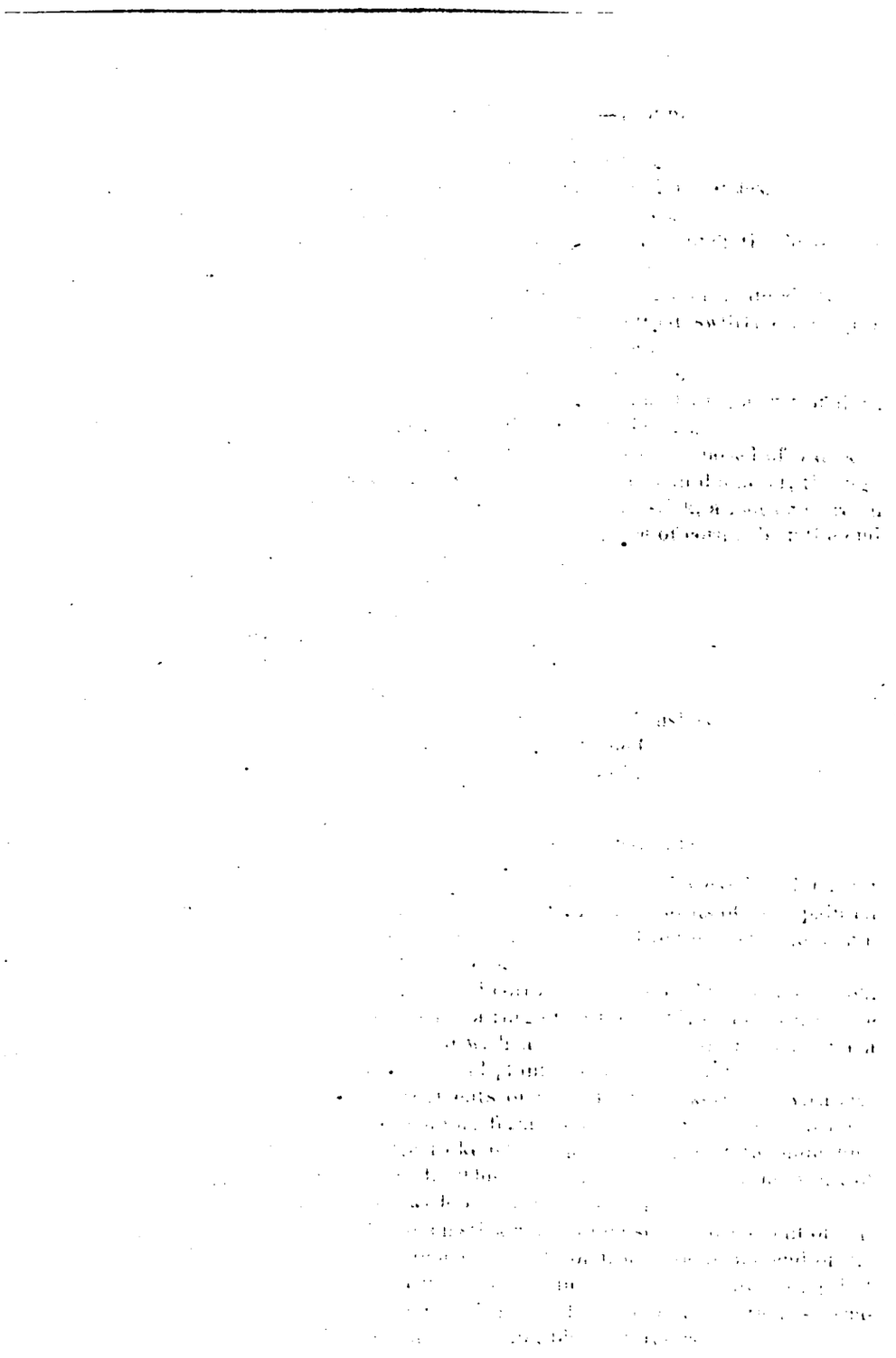
68701–25. Gourds for carrying water, &c.
68726–57. Gourd rattles, variously ornamented, used in dances.
68758. Gourd drinking vessel.
68759–75. Bows and arrows, used in dances.
68776. Toy bows and arrows.
68777. Bow, bow case, quiver, and arrows.
68778. Strands of beads made of black seeds.
68779–83. Wooden birds with movable wings, used in dances and ceremonies.
68797–800. Wooden forceps.
68802. A hinged toy, used in dances to imitate lightning.
68803. Whirligig, a child's toy.
68804. Necklace of acorn-cups.
68818–20. Wooden combs.
68821–25. Cylindrical wooden boxes for small articles.
68826. Drum, the body of wood, the heads of skin.
68827–8. Drumsticks.
68829–32. Sticks and tops, used in a game.
68833. Blocks or tops, used in a game.
68834. Spinning toy, a kind of top, consisting of a disk with a spindle through its center.
68835. Tops.
68837. Wooden tongs.
68838. Wooden comb.
68839–40. Wooden knives.
68841. Child's pop-gun.
68842. Stick with a stone, covered with skin at one end, used as a mallet in a ball game.
68844. Notched stick for bird trap.
66847–9. Wooden hoops or arches, used by girls to arrange the hair at the sides of the head.

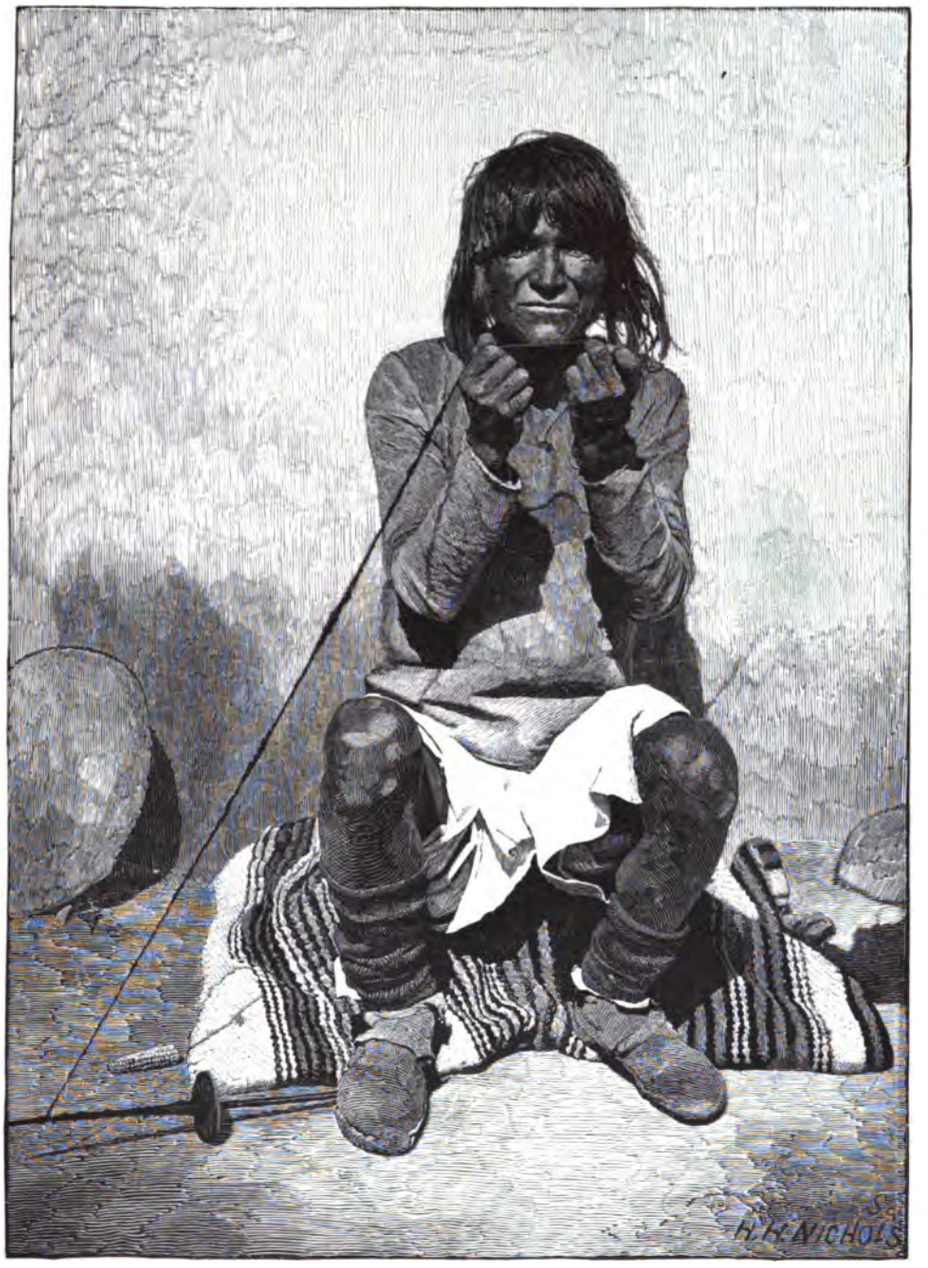
68850. Wooden implement used for twisting ropes.
68851–2. Notched sticks and deer's scapulæ, used as rattles.
68853–9. Notched sticks, used as rattles in dances.
68862. Wooden hooks used with the ropes, with which the load is secured upon the back of an animal.
68863–8. Flat wooden sticks, variously notched and painted, which, when attached to a string and whirled swiftly round, produce a buzzing noise; used in dances.
68870–4. Sets of cylindrical blocks, used in a game.
68875. Ornament of wood painted light green, and with a tuft of dark brown wool in the middle, used in dances.
68876–97. Spindles used in spinning. They are composed of a disk of wood, or earthenware, about 4 inches in diameter, through the center of which passes a slender stick, a foot or more in length. Several of them have a piece of corn-cob on the end of the stick. For use, see pl. xliv.
68898. Sticks used in spinning.
68899. Sticks used for arrow shafts.
68900. Bird snares.
68901–7, 69025. Sleys used in weaving.
68908–9. Reed matting.
68910–15. Bundles of grass stems used as hair brushes.
68916–25. Ceremonial sticks with balls attached.
68965–6. Waist or breech cloths of cotton cloth.
68979. Grass hair brush.

HEAD-DRESSES, DANCE ORNAMENTS, IMAGES, ETC.

68981. Dancing head-dress, made of a hemispherical wicker-work basket to fit the head, surmounted by large horns of skin painted with light colored clay, and supposed to represent the mountain sheep (ovis americanus).
68983. Head-dress of leather and cotton cloth, painted white and black.
68986. Head-dress composed of a ring of cotton cloth, stuffed with some soft substance, and with a wooden tablet at one side and a horn at the other, and painted black and white.
68987–90. Head-dresses, segments of a circle of basketware, with zigzag sticks protruding from the edge to represent lightning.
68991–4. Head-dress shaped like 68986, but the ring is of rawhide, and the rest of wood. The horn on one side is a frame-work of twigs covered with a netting of cotton twine.
68996–9. Yoke-shaped wooden stick with funnel-shaped ornament of cotton string, stretched over ribs of iron wire at one end of it.
69000. A dance ornament very similar in shape to the preceding, but the funnel is of gourd, painted green, and the stick is ornamented with white, red, and black in the center.








MOKI METHOD OF SPINNING.

69001. Ceremonial throwing stick or "boomerang," painted white, red, and black.

69002. Dance ornament of wood, ornamented with a tuft of wool.

69003. Gambling sticks painted in lozenges, black and white.

69004. Gambling sticks, plain black.

69005. Bird upon the end of painted stick, used in dances.

69006–7. Large wooden melon shaped balls, painted, used in ceremonies.

69009–15. Toy cradles of wood and basket work.

69016–17. Ornament made of corn husks, like three flowers upon a stalk, carried in the corn dance.

69018–19. Head ornament. A ring of corn husk is surmounted by eight pieces of corn cob, equidistant, and ornamented with feathers.

69027. Ornament made of husks for the corn dance.

69032. Head dress. A ring of corn husks, from which protrude horizontally zigzag sticks, pointed, and painted red, green, and yellow, which are set close together around the circle; these sticks are said to represent lightning.

69033. Ornament used in the grass dance; a piece of wood, notched on both edges, gaily painted, yellow, green, white, and black, and decorated with a tuft of grass.

69034–6. Ornaments similar to the above, but without the tuft of grass; carried in dances.

69037. Ornament similar to above, with tuft of grass and feathers.

60038. Ornament similar to above, with tuft of feathers tied with bright-colored cotton and woolen yarns.

69039–44. Ear ornaments, a sort of rosette made by winding bright-colored cotton and woolen yarns upon a framework of wood, and worn over the ears in dances.

69045–47. Dance ornament; a funnel shaped section of gourd, gaily painted.

69048. Dance ornaments or charms, made of two small tablets of wood, and painted of a whitish color, upon which is drawn, with black lines, an elongated shield shaped figure divided into squares, in each of which is a black dot.

69049–52. Wooden knobs painted yellow, used as dance ornaments.

69053–65. Wooden dance ornaments, gaily painted, and having disks of wood or leather, and balls attached.

69066–7. Horn shaped dance ornaments of gourd, painted and carved, with two balls attached to each one by strings.

69068–75. Horn shaped dance ornaments of gourd, painted and carved.

69076–69107. Wooden dolls or images, very brightly painted. They are from six to eight inches in height, rudely carved, and sometimes ornamented with feathers.

69108. A ceremonial image or idol, painted white, with black ornaments. It has a fan-shaped head-dress of white rays tipped with black.

69109–12. Ceremonial images with large head-dresses of various combinations of pyramidal figures, vividly colored green, red, black, and white.

69113–4. Large elaborately carved and painted ceremonial head-dresses.

69115. Carved wooden bird.

69116. Small wooden dance ornament, red, green, and blue.

69117. Small wooden dance ornament, shaped like the tail of a fan-tailed pigeon; the body green; the radiating sticks red.

69118. Ornament similar to the preceding, but circular in shape.

69119–20. Are head ornaments of wood, painted blue, red, green, and yellow, in which the pyramidal figure is variously combined; 69120 has a strap of leather to fasten it to the head.

69121. An ornament formed of two small wooden tablets, hinged together in the center with thongs of hide, the upper part of each tablet cut into steps, so that the two form a pyramid, painted green, with tadpoles in black scattered over side.

69122, 69125. Dance ornaments similar to 69119–20.

69123–4, 69126–31. Are zigzag sticks or wands, variously painted green, yellow, red; are carried in the hands in dances.

69132–5. Dance ornaments. In the center of two sticks, which form a cross, is placed a ring of wood, over which a piece of skin is stretched, upon which a face is painted in a rudely conventional manner, the colors being green, yellow, red, white, and black. Outside of this is secured a zigzag ring of cornhusks.

69136–7. Pads of cornhusks worn by women on the side of the head.

69138–40. Small wooden hoops covered with a netting of cotton yarn.

69141. Small wooden hoop with a visor of skin, like a shade for the eyes.

69142–45. Wooden hoops, over which cotton cloth is stretched, and painted green, upon which grotesque faces and other figures are rudely drawn in black.

69146–7. Triangular wooden frame covered with cotton cloth, painted green and ornamented with a figure in black, red, and yellow.

69148. Two oblong wooden frames, similar to preceding.

69149. Ceremonial throwing stick, or boomerang.

69150. Wooden ornament carried in the dance.

69151–2. Ceremonial head-dresses. A circular rim of wood supports semi-circular arched ribs, which cross each other, and from their center rises a perpendicular wooden tablet, carved and painted.

69153. Head-dress, formed of four narrow slats of wood, neatly hinged together with small thongs of skin; the outer slats are longer than the two middle ones, thus leaving a square recess for the head. The upper part of each slat is cut into a pyramid of steps, which are each painted of a different color. The whole is brilliantly colored in red, green, yellow, and blue.

69154. A similar head-dress, but it is of a single piece, and the top is in three scollops.
69155. Similar to preceding, but the top line is straight.
69159–60. Similar to preceding, but the top rises in three steps, forming a pyramid, brightly painted and quite elaborately ornamented.
69156–8. Wooden wands, variously painted and ornamented. They are carried in the hands at dances.
69161. Wooden board with two handles at lower end, painted with two dancing figures, with joined hands, and other ornaments. Carried in the hands in dances.
69165. Board similar to above, but without the human figures, and is curiously painted in red, green, yellow, black, and white.
69162. Wand or rod with a wisp of grass attached at one end.
69163–4, 69166–91. Narrow wooden slats with a handle notched in one end, and variously ornamented. The predominant design is a curiously conventionalized human figure, painted in gaudy colors.
59192. An Indian flute.
69193–218. Throwing-sticks or boomerangs, some painted, others plain.

#### IMPLEMENTS FOR WEAVING, ETC.

69219–20. Looms with cloth partly woven.
69221–2. Sticks, part of loom.
69223–6. Flat sticks for breaking up the woof.
69227. Curved, flat-batten stick.
69228–29. Wooden agricultural implement for digging.

## ANIMAL SUBSTANCES.

#### HORN AND BONE.

68784–8. Cow and sheep bells made of horn.
68789. Horns of an antelope.
68790. Horn of a goat.
68791. Rattle of turtle shell.
68792–6. Implements of horn for straightening and polishing arrow shafts.
68810–17. Perforators of bone.
68969–78. Children's buckskin moccasins.
68982. Head-dress of buckskin, with long horns of the same material, painted black and white. Used in dances.
68980. Fringed leather girdle.

#### FEATHERS.

69020–4. Feather ornaments used in dances.

WOVEN FABRICS, ETC,

68928. Woven woolen belt, red and black, with green borders.
68929. A head-dress cut out of a gray felt hat, and ornamented with pieces of red woolen cloth, and figures drawn with black lines.
68861. Plaited woolen rope, with wooden hooks attached, used for fastening the load upon the back of an animal.

SKIN OR LEATHER.

68801. Head-strap of raw hide used for carrying loads.
68805–9. Bags or pouches made of bull's scrotum.
68836. Leathern pouch.
68843. Skin-covered ball for a game.
68845–6. Wristlets for protecting the arm when shooting with the bow and arrow.
68861. Leather ring used with a rope or lariat for fastening loads upon the backs of animals.
68869. Foot-ball of skin stuffed with wool.
68926–7. Belts of raw hide.
68930. Leather pouch and strap.
68931–2. Buckskin pouches.
68933–4. Knife-sheaths of skin.
68935. Leather pouch.
68936–7. Fringed deer-skin bands.
68938. Sling of buckskin.
68939–46. Ornamental bands for the ankle; made of narrow strips of skin, ornamented with bright colored woolen yarns.
68947–8. The same ornamented with porcupine quills.
68949–50. Fringed leather girdles.
68951. Leather wristlet.
68952–8. Anklets of buckskin, fringed.
68959–63. Leggings of buckskin.
68964. Waistcloth of buckskin and cotton.
68967–8. Saddle-bags of buckskin, ornamented with red woolen cloth, and long fringe of buckskin.

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